

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Sin J. Lee Examiner #: 76060 Date: 11-16-04
 Art Unit: 1752 Phone Number 301-2-1333 Serial Number: 10/050,185
 Mail Box and Bldg/Room Location: 9D66 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

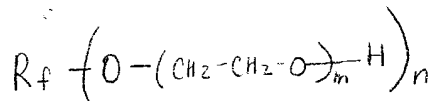
Title of Invention: Fluorinated photopolymer composition and waveguide Device

Inventors (please provide full names): Pottebaum, Indra S.; Xu, Chuck C.; Osuch, Chris E.; Pant, Deepthi
Eladada, Louay A.

Earliest Priority Filing Date: 1-18-02

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please search for fluorinated acrylate or fluorinated methacrylate prepared from reacting
 ① the following compound



and ② acryloyl chloride
 or methacryloyl chloride
 $(H_2C=CH-C(=O)-Cl \text{ or } H_2C=C(CH_3)-C(=O)-Cl)$

R_f = fluorinated organic moiety

$m = 1-10$

$n = 2-6$
 (hard to control, there may be cases where $n=1$ in CH_3)

(If there is too many hits, then

please cross the search with

"photoinitiator"

STAFF USE ONLY**Type of Search****Vendors and cost where applicable**

Searcher: EL NA Sequence (#) _____ STN \$ 803.56
 Searcher Phone #: _____ AA Sequence (#) _____ Dialog _____
 Searcher Location: _____ Structure (#) (3) (amb) Questel/Orbit _____
 Date Searcher Picked Up: _____ Bibliographic (amb) Link _____
 Date Completed: 11-24-04 Litigation (amb) Lexis/Nexis _____
 Searcher Prep & Review Time: 5 Fulltext _____ Sequence Systems _____
 Clerical Prep Time: _____ Patent Family _____ WWW/Internet _____
 Online Time: 125 Other _____ Other (specify) _____

=> file reg

FILE 'REGISTRY'

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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=> display history full 11-

FILE 'REGISTRY'

L1 E ACRYLOYL CHLORIDE/CN
1 SEA "ACRYLOYL CHLORIDE"/CN
E METHACRYLOYL CHLORIDE/CN
L2 1 SEA "METHACRYLOYL CHLORIDE"/CN
D L1 1 RN
L3 282 SEA 814-68-6/CRN
D L2 1 RN
L4 333 SEA 920-46-7/CRN

FILE 'LREGISTRY'

L5 STR
L6 STR L5
L7 STR

FILE 'REGISTRY'

L8 SCR 1700 AND 1970
L9 2 SEA SSS SAM ((L5 AND L7) OR L6) AND L8

FILE 'HCAPLUS'

L10 8 SEA POTTEBAUM ?/AU
L11 101687 SEA XU ?/AU
L12 125 SEA OSUCH ?/AU
L13 1723 SEA PANT ?/AU
L14 57551 SEA EL DADA ?/AU OR ELDADA ?/AU OR EL ?/AU OR DADA ?/AU
L15 2 SEA L10 AND L11 AND L12 AND L13 AND L14
SEL L15 1-2 RN

FILE 'REGISTRY'

L16 18 SEA (1703-58-8/BI OR 4422-95-1/BI OR 444023-61-4/BI OR
L17 6 SEA L16 AND X/ELS

FILE 'LREGISTRY'

L18 STR
L19 STR L6
L20 STR L7

FILE 'REGISTRY'

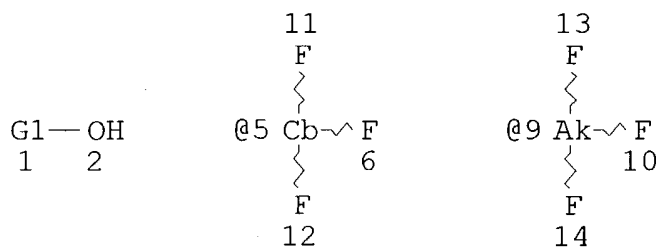
L21 17 SEA SSS SAM (((L5 OR L18) AND L20) OR L19) AND L8
 L22 2540 SEA SSS FUL (((L5 OR L18) AND L20) OR L19) AND L8
 SAV L22 LEE185/A
 L23 6 SEA L22 AND (L3 OR L4)
 D L23 1-6 IDE

FILE 'HCAPLUS'

L24 1718 SEA L22
 L25 7167 SEA L1 OR L2
 L26 44 SEA L24 AND L25
 L27 93022 SEA ((PHOTO OR LIGHT OR PHOTOLY?) (2A) (RX# OR RXN# OR
 REACT? OR SENSITI? OR POLYM? OR CURE# OR CURING# OR
 CURAB? OR CROSSLINK? OR CROSS(W)LINK? OR CAT# OR
 CATALY?))/BI,AB
 L28 103392 SEA ((ULTRAVIOLET? OR ULTRA(W)VIOLET? OR UV# OR SUV OR
 LUV OR RADIA? OR IRRADIA? OR EMANAT? OR EMIT? OR EMISS?
 OR LASER?) (2A) (RX# OR RXN# OR REACT? OR REACT? OR POLYM?
 OR CURE# OR CURING# OR CURAB? OR CAT# OR CATALY? OR
 CROSS(W)LINK? OR CROSSLINK?))/BI,AB
 L29 168631 SEA (PHOTORX## OR PHOTOREACT? OR PHOTOSENS? OR PHOTOPOLYM
 ? OR PHOTOCUR? OR PHOTOHARDEN? OR PHOTOCROSS? OR
 PHOTOCAT?))/BI,AB
 L30 13643 SEA PHOTOINIT? OR PHOTO(A)INIT?
 L31 47894 SEA WAVEGUID? OR (WAVE# OR WAVING#) (2A)GUID?
 L32 12 SEA L26 AND ((L27 OR L28 OR L29 OR L30 OR L31))
 L33 6178 SEA (L1 OR L2) (L) RACT/RL
 L34 454 SEA L24 (L) RACT/RL
 L35 525 SEA L1/D OR L1/DP OR L2/D OR L2/DP
 L36 100 SEA L22/D OR L22/DP
 L37 29 SEA (L33 OR L35) AND (L34 OR L36)
 L38 17 SEA L37 NOT L32
 L39 15 SEA L26 NOT (L32 OR L38)
 L40 12 SEA L32 AND (1900-2002/PY OR 1900-2002/PRY)
 L41 17 SEA L38 AND (1900-2002/PY OR 1900-2002/PRY)
 L42 15 SEA L39 AND (1900-2002/PY OR 1900-2002/PRY)

FILE 'REGISTRY'

=> d l22 que stat
 L5 STR



VAR G1=5/9

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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

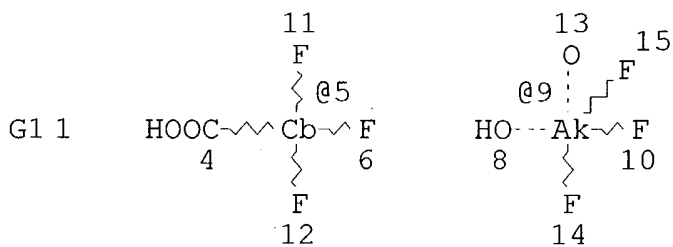
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NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

L8 SCR 1700 AND 1970

L18 STR



VAR G1=5/9

NODE ATTRIBUTES:

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DEFAULT ECLEVEL IS LIMITED

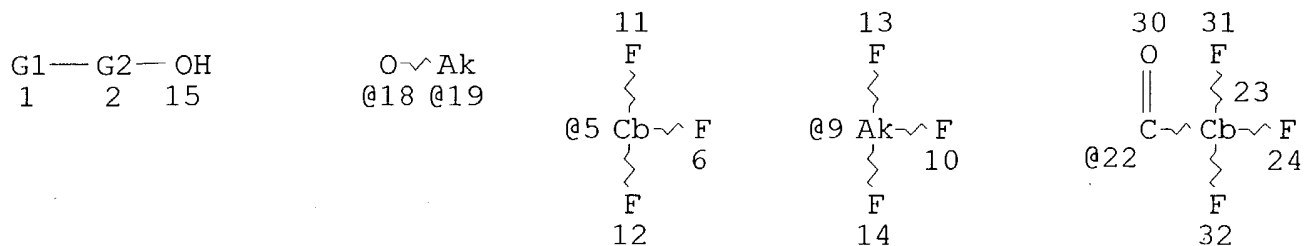
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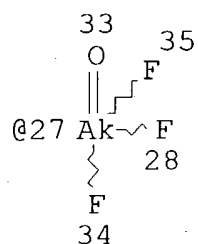
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

L19 STR



Page 1-A



Page 1-B

VAR G1=5/9/22/27

REP G2=(1-10) 18-1 19-15

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DEFAULT ECLEVEL IS LIMITED

ECOUNT IS M2-X3 C AT 19

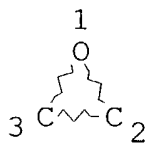
GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 24

STEREO ATTRIBUTES: NONE

L20 STR



NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 3

STEREO ATTRIBUTES: NONE

L22 2540 SEA FILE=REGISTRY SSS FUL (((L5 OR L18) AND L20) OR L19)
AND L8

100.0% PROCESSED 144866 ITERATIONS
SEARCH TIME: 00.00.03

2540 ANSWERS

=> file hcaplus

FILE 'HCAPLUS'

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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=> d 132 1-12 cbib abs hitstr hitind.

L32 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN

2004:534012 Document No. 141:90579 Perfluorostyrene compound, and coating solution and optical **waveguide** device using the compound. Kim, Ji-hyang; Kim, Jae-il; Kim, Tae-kyun; Lee, Hyung Jong; Han, Seon Gyu (Zen Photonics Co., Ltd., S. Korea). U.S. Pat. Appl. Publ. US 2004127632 A1 20040701, 13 pp. (English). CODEN: USXXCO. APPLICATION: US 2003-616889 20030710. PRIORITY: KR 2002-40901 20020712.

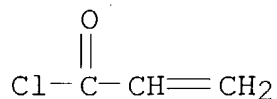
AB A F compd. has perfluorostyrene introduced at a terminal end, characterized in that the introduction of perfluorostyrene results in a facile fabrication of thin films by a **UV curing** or a thermal curing, high thermal stability and chem. resistance, and low optical propagation loss and birefringence when applied to **waveguides**. The structure of the F compd. is represented by $[\text{CH}_2:\text{CHC}_6\text{F}_4\text{Z}]_y\text{Rf}(\text{ZArZRf})_x[\text{ZC}_6\text{F}_4\text{CH}:\text{CH}_2]_{y'}$, where Z = O or S; Rf = aliph. or arom. group; y = 1-10, y' = 0-1; x = 0-200; Ar = $\text{MeC}_6\text{F}_4\text{RC}_6\text{F}_4\text{Me}$ or $\text{C}_6\text{F}_3\text{MeX}$; R = direct single bond, CO, SO₂, S and O, and X = F, Cl, Br and I.

IT 814-68-6, Acryloyl chloride 330562-44-2

(perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)

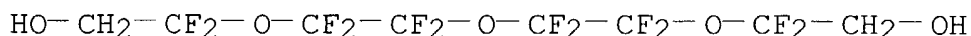
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 330562-44-2 HCAPLUS

CN Ethanol, 2,2'-[oxybis[(1,1,2,2-tetrafluoro-2,1-ethanediyl)oxy]]bis[2,2-difluoro- (9CI) (CA INDEX NAME)



IT 713525-78-1DP, reaction product with pentafluorostyrene
 713525-79-2DP, reaction product with pentafluorostyrene
 (perfluorostyrene-terminated **photopolymerizable** compd.
 for core and cladding layers of optical **waveguide**
 device)

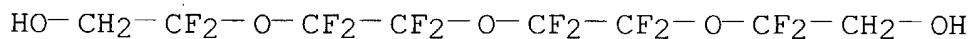
RN 713525-78-1 HCAPLUS

CN Ethanol, 2,2'-[oxybis[(1,1,2,2-tetrafluoro-2,1-ethanediyl)oxy]]bis[2,2-difluoro-, polymer with hexafluorobenzene (9CI) (CA INDEX NAME)

CM 1

CRN 330562-44-2

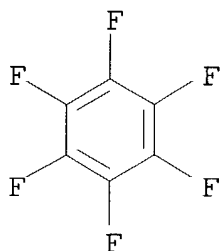
CMF C8 H6 F12 O5



CM 2

CRN 392-56-3

CMF C6 F6



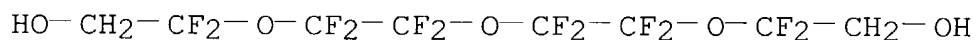
RN 713525-79-2 HCAPLUS

CN Ethanol, 2,2'-[oxybis[(1,1,2,2-tetrafluoro-2,1-ethanediyl)oxy]]bis[2,2-difluoro-, polymer with bromopentafluorobenzene (9CI) (CA INDEX NAME)

CM 1

CRN 330562-44-2,

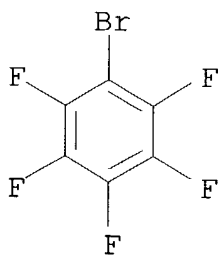
CMF C8 H6 F12 O5



CM 2

CRN 344-04-7

CMF C6 Br F5



IC ICM C08L027-12

NCL 524544000; 526242000

CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 35, 73

ST perfluorostyrene terminal **photopolymerizable** compd coating
optical **waveguide**

- IT Coating materials
(**UV-curable**; perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)
- IT Optical **waveguides**
(film; perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)
- IT Polyethers, uses
Polyoxyalkylenes, uses
(perfluorostyrene-terminated; perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)
- IT 3524-68-3, Pentaerythritol triacrylate 517908-34-8
(diluent copolymn.; perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)
- IT 713525-84-9P
(diluent prepn. and copolymn.; perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)
- IT 533-73-3, 1,2,4-Benzenetriol 653-34-9, Pentafluorostyrene
814-68-6, Acryloyl chloride 1478-61-1,
2,2-Bis(4-hydroxyphenyl)hexafluoropropane 3236-71-3,
9,9-Bis(4-hydroxyphenyl)fluorene 27955-94-8, 1,1,1-Tris(4-hydroxyphenyl)ethane 90177-96-1, 2,2,3,3,4,4,5,5,6,6,7,7-Dodecafluoro-1,8-octanediol **330562-44-2**
(perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)
- IT 713525-80-5P 713525-81-6P 713525-82-7P 713525-83-8P
(perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)
- IT 653-34-9DP, Pentafluorostyrene, reaction product with fluoropolymer
136875-49-5DP, reaction product with pentafluorostyrene
136875-50-8DP, reaction product with pentafluorostyrene
426263-29-8DP, reaction product with pentafluorostyrene
713525-76-9DP, reaction product with pentafluorostyrene
713525-78-1DP, reaction product with pentafluorostyrene
713525-79-2DP, reaction product with pentafluorostyrene
(perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)
- IT 125635-55-4P 713525-85-0P
(prepn. and copolymn.; perfluorostyrene-terminated **photopolymerizable** compd. for core and cladding layers of optical **waveguide** device)

L32 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN
 2004:289759 Document No. 140:312061 Lithographic printing plate master
 with uniform image formation layer. Fujita Kazuo (Fuji Photo Film
 Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 2004109887 A2
20040408, 56 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
 2002-275674 20020920.

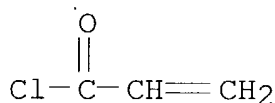
AB The title lithog. printing plate master contains a fluoropolymer
 including a fluoroaliph. group represented by -
 $\text{CF}(\text{CF}_3)(\text{OCF}_2\text{CF}(\text{CF}_3))_n\text{OCF}_2$ [$n = 0-10$] in an image formation layer.
 The printing plate master shows excellent developability and
 ink-reception.

IT **814-68-6**, Acrylic acid chloride **14548-74-4**
26537-88-2

(monomer prepn. of fluoropolymer for lithog. printing plate
 master with uniform image formation layer)

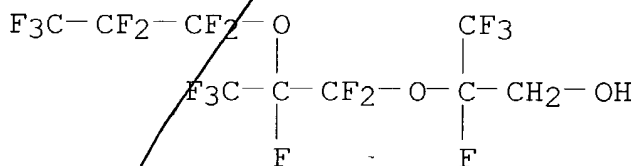
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



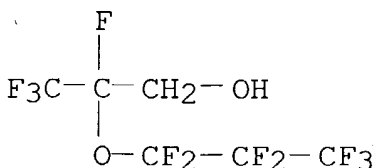
RN 14548-74-4 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]- (9CI) (CA INDEX NAME)



RN 26537-88-2 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)- (8CI, 9CI)
 (CA INDEX NAME)



IC ICM G03F007-00
ICS G03F007-023; G03F007-033
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and
Other Reprographic Processes)
Section cross-reference(s): 38
IT Photoimaging materials
(**photopolymerizable**; lithog. printing plate master with
uniform image formation layer)
IT **814-68-6**, Acrylic acid chloride 1592-20-7,
4-Chloromethylstyrene **14548-74-4 26537-88-2**
(monomer prepn. of fluoropolymer for lithog. printing plate
master with uniform image formation layer)

L32 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN
2004:20368 Document No. 140:94453 Fluorinated acrylate derivatives
having carbonate groups and polymerizable composition comprising
same. Kim, Eunkyong; Cho, Song Yun (S. Korea). U.S. Pat. Appl.
Publ. US 2004006188 A1 20040108, 10 pp (English). CODEN: USXXCO.
APPLICATION: US 2003-460022 20030611 PRIORITY: KR 2002-34939
20020621.

AB A polymerizable compn. comprises a carbonate group-contg. acrylate
deriv. of $R_4(R_3OCO_2R_2COCR_1:CH_2)_n$ (I), wherein: n is 1 to 4; R1 is
hydrogen or C1-3 alkyl; R2 is $-(CH_2)_aO-$ or $-(CH_2CH_2O)_b-$ (a is 1 to
20, and b is 2 to 20); R3 is an optional substituent selected from
the group consisting of $-CH_2-$, $-C_6H_4-$ and $-C_6F_4-$; and R4 is C1-10
perfluoroalkyl when n = 1; when n = 2, a bridging group comprising
at least one linking moiety selected from the group consisting of
C1-3 perfluoroalkylene, C1-3 perfluoroalkyleneoxy and $-CF_2CFCl-$; or
when n = 3 or 4, a bridging group comprising 2 and the linking
moiety. I is used to prep. a polymer film or molded product having
improved compatibility with dyes, high adhesion to a substrate, low
optical loss and low birefringence.

IT **642474-58-6P 642474-61-1P**
(fluorinated acrylate derivs. having carbonate groups and
polymerizable compn. comprising same)

RN 642474-58-6 HCAPLUS
CN 2,6,16,20-Tetraoxaheneicosanedioic acid, 9,11,13-trichloro-
8,8,9,10,10,11,12,12,13,14,14-undecafluoro-4,18-dihydroxy-,
bis[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester (9CI) (CA INDEX
NAME)

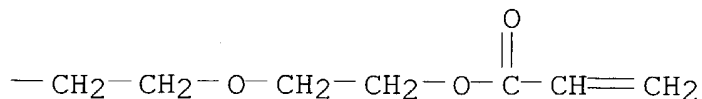
$$\text{Me}-\overset{\text{H}_2\text{C}}{\underset{\parallel}{\text{C}}}-\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{O}-\text{CH}_2-\overset{\text{OH}}{\underset{|}{\text{CH}}}-\text{CH}_2-\text{O}-\text{CH}_2-\text{CF}_2-\underset{\underset{\text{Cl}}{|}}{\overset{\text{F}}{\text{C}}}-\text{CF}_2-\underset{\underset{\text{Cl}}{|}}{\overset{\text{F}}{\text{C}}}-$$
$$\begin{array}{ccccccc} & \text{F} & & \text{OH} & & \text{O} & & \text{O} & \text{CH}_2 \\ & | & & | & & || & & || & | \\ -\text{CF}_2- & \text{C}- & \text{CF}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}- & \text{CH}_2-\text{O}-\text{C}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{C}-\text{C}-\text{Me} \\ & | & & & & & & & \\ & \text{Cl} & & & & & & & \end{array}$$

RN	642474-61-1	HCAPLUS
CN	2,6,16,18,21,24,27-Heptaoxatriacont-29-enoic acid, 9,11,13-trichloro-8,8,9,10,10,11,12,12,13,14,14-undecafluoro-4- hydroxy-17,28-dioxo-, 2-[2-[2-[(1-oxo-2- propenyl)oxy]ethoxy]ethoxy]ethyl ester (9CI) (CA INDEX NAME)	

$$\text{H}_2\text{C}=\text{CH}-\overset{\text{O}}{\parallel}\text{C}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\overset{\text{O}}{\parallel}\text{C}-\text{O}-\text{CH}_2-\text{CF}_2-$$
$$\begin{array}{ccccccc} \text{F} & & \text{F} & & \text{F} & & \text{OH} \\ | & & | & & | & & | \\ -\text{C}- & \text{CF}_2- & \text{C}- & \text{CF}_2- & \text{C}- & \text{CF}_2- & \text{CH}- \\ | & & | & & | & & | \\ \text{Cl} & & \text{Cl} & & \text{Cl} & & \end{array}$$

— CH₂ — O — CH₂ — CH₂ — O — C(=O) — O — CH₂ — CH₂ — O —

PAGE 1-C



IT 642474-68-8P 642474-69-9P 642474-72-4P
642474-77-9P

(fluorinated acrylate derivs. having carbonate groups and
polymerizable compn. comprising same)

RN 642474-68-8 HCAPLUS

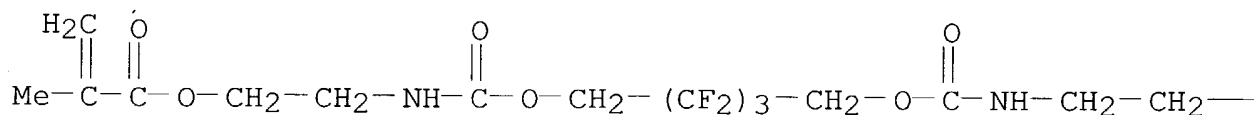
CN 2,6,16,20-Tetraoxaheneicosanedioic acid, 9,11,13-trichloro-
8,8,9,10,10,11,12,12,13,14,14-undecafluoro-4,18-dihydroxy-,
bis[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with
bis[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] 4,4,6,6,7,7,9,9-
octafluoro-2,5,8,11-tetraoxadodecanedioate, 7,7,8,8,9,9-hexafluoro-
4,12-dioxo-5,11-dioxa-3,13-diazapentadecane-1,15-diyl
bis(2-methyl-2-propenoate) and 1,3,5-tri-2-propenyl-1,3,5-triazine-
2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

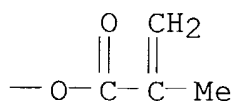
CRN 642474-62-2

CMF C19 H24 F6 N2 O8

PAGE 1-A



PAGE 1-B

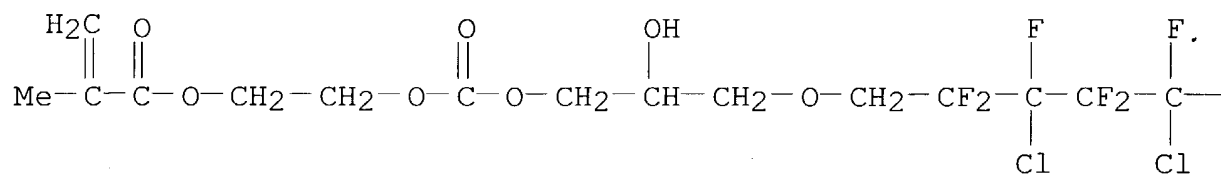


CM 2

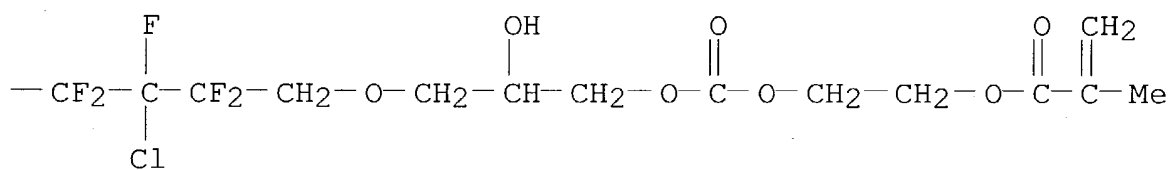
CRN 642474-58-6

CMF C29 H34 C13 F11 O14

PAGE 1-A



PAGE 1-B

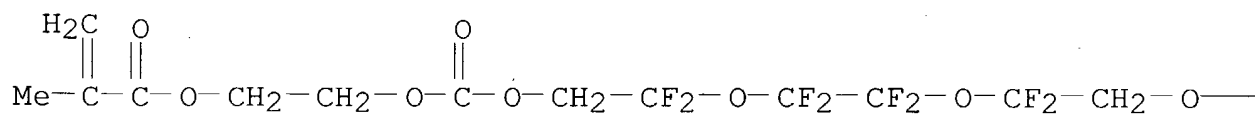


CM 3

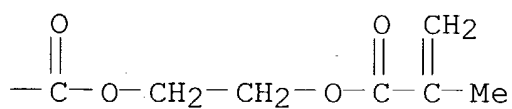
CRN 642474-53-1

CMF C20 H22 F8 O12

PAGE 1-A



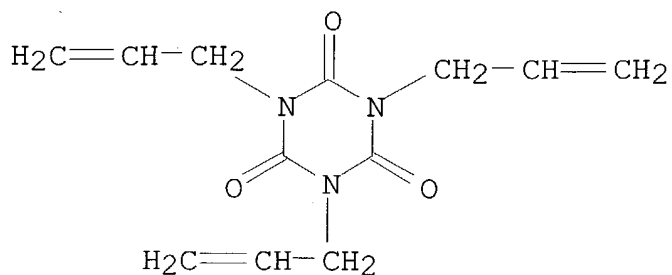
PAGE 1-B



CM 4

CRN 1025-15-6

CMF C12 H15 N3 O3



RN 642474-69-9 HCAPLUS

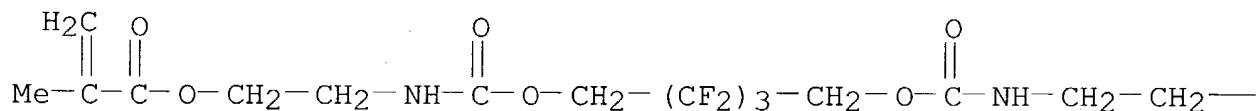
CN 2,5,8,11-Tetraoxadodecanedioic acid, 4,4,6,6,7,7,9,9-octafluoro-, bis[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl] ester, polymer with 7,7,8,8,9,9-hexafluoro-4,12-dioxo-5,11-dioxa-3,13-diazapentadecane-1,15-diyl bis(2-methyl-2-propenoate), 2-[2-[2-[(1-oxo-2-propenyl)oxy]ethoxy]ethoxy]ethyl 5,7,9-trichloro-4,4,5,6,6,7,8,8,9,10,10-undecafluoro-14-hydroxy-17,28-dioxo-2,12,16,18,21,24,27-heptaioxatriacont-29-enoate and 1,3,5-tri-2-propenyl-1,3,5-triazine-2,4,6(1H,3H,5H)-trione (9CI) (CA INDEX NAME)

CM 1

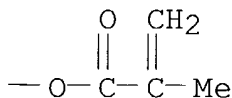
CRN 642474-62-2

CMF C19 H24 F6 N2 O8

PAGE 1-A



PAGE 1-B

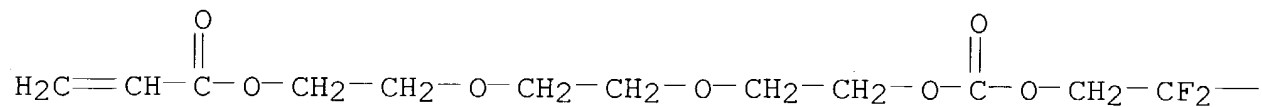


CM 2

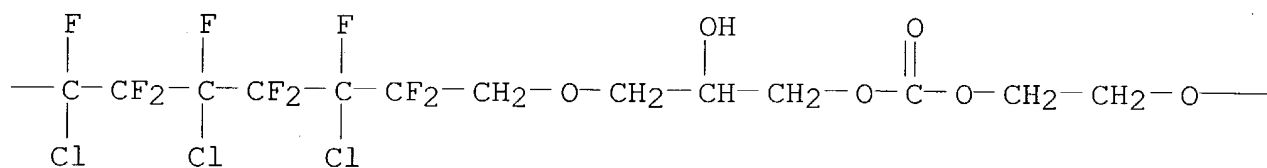
CRN 642474-61-1

CMF C32 H40 Cl3 F11 O16

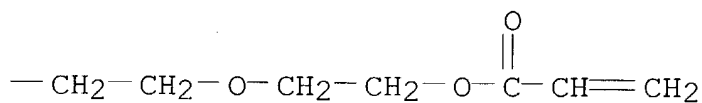
PAGE 1-A



PAGE 1-B



PAGE 1-C

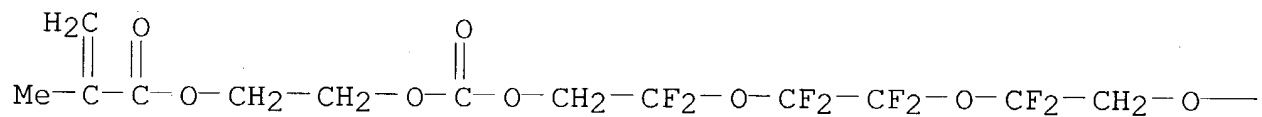


CM 3

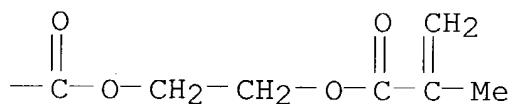
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CMF C20 H22 F8 O12

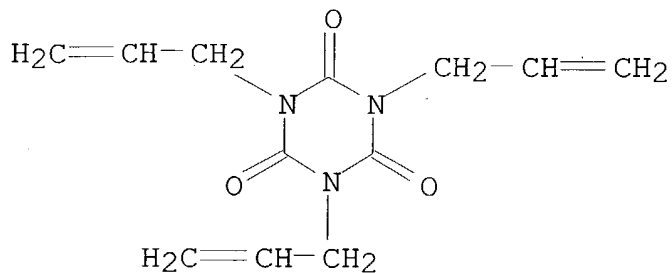
PAGE 1-A



PAGE 1-B



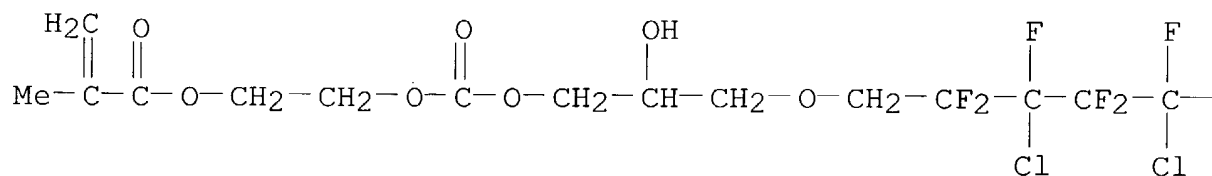
CRN 1025-15-6
CMF C12 H15 N3 O3



CM 1

CRN 642474-58-6
CMF C29 H34 C13 F11 O14

PAGE 1-A



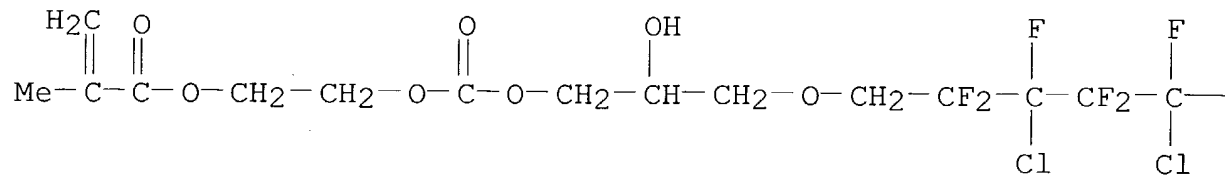
$$\begin{array}{ccccccc} & \text{F} & & \text{OH} & & \text{O} & & \text{O} & \text{CH}_2 \\ & | & & | & & || & & || & | \\ -\text{CF}_2-\text{C}-\text{CF}_2-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}-\text{CH}_2-\text{O}-\text{C}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\text{C}-\text{C}-\text{Me} \\ & | & & & & & & & \\ & \text{Cl} & & & & & & & \end{array}$$

CRN 642474-53-1
CMF C20 H22 F8 O12

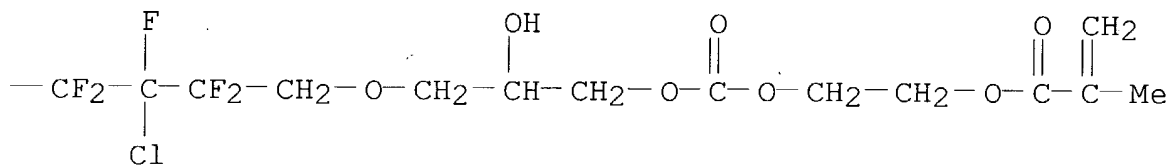
$$\text{Me}-\overset{\text{H}_2\text{C}}{\underset{\parallel}{\text{C}}}-\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{O}-\text{CH}_2-\text{CH}_2-\text{O}-\overset{\text{O}}{\underset{\parallel}{\text{C}}}-\text{O}-\text{CH}_2-\text{CF}_2-\text{O}-\text{CF}_2-\text{CF}_2-\text{O}-\text{CF}_2-\text{CH}_2-\text{O}-$$
$$\text{---C(=O)---O---CH}_2\text{---CH}_2\text{---O---C(=O)---CH}_2\text{---Me}$$

CRN 642474-58-6
CMF C29 H34 C13 F11 O14

PAGE 1-A



PAGE 1-B

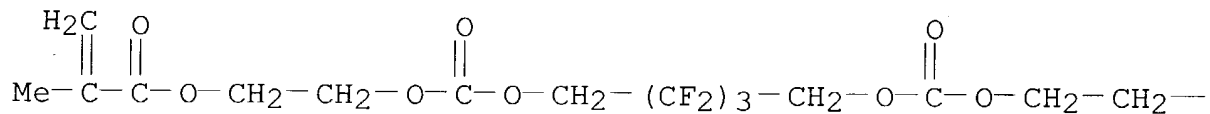


CM 2

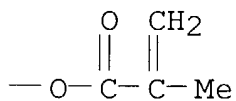
CRN 642474-54-2

CMF C19 H22 F6 O10

PAGE 1-A



PAGE 1-B

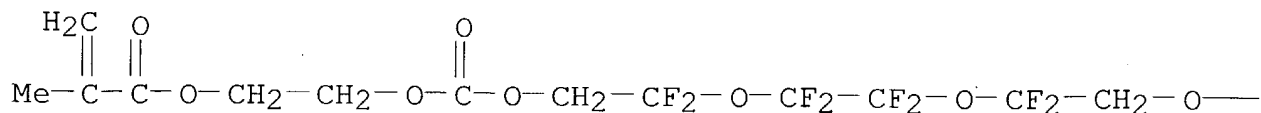


CM 3

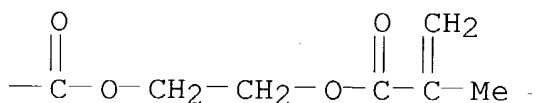
CRN 642474-53-1

CMF C20 H22 F8 O12

PAGE 1-A



PAGE 1-B



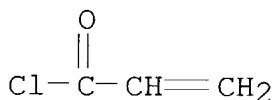
IT 814-68-6, Acryloyl chloride 129301-42-4

642474-57-5 642474-60-0

(fluorinated acrylate derivs. having carbonate groups and polymerizable compn. comprising same)

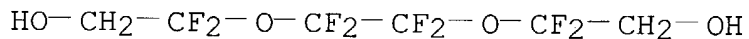
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 129301-42-4 HCAPLUS

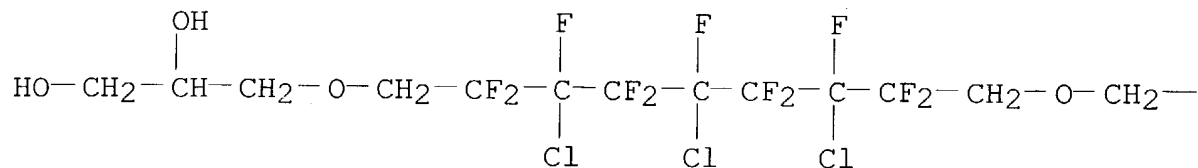
CN Ethanol, 2,2'-[(1,1,2,2-tetrafluoro-1,2-ethanediyl)bis(oxy)]bis[2,2-difluoro- (9CI) (CA INDEX NAME)



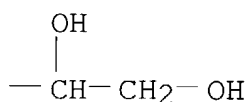
RN 642474-57-5 HCAPLUS

CN 1,2-Propanediol, 3,3'-[(3,5,7-trichloro-2,2,3,4,4,5,6,6,7,8,8-undecafluoro-1,9-nonanediyl)bis(oxy)]bis- (9CI) (CA INDEX NAME)

PAGE 1-A

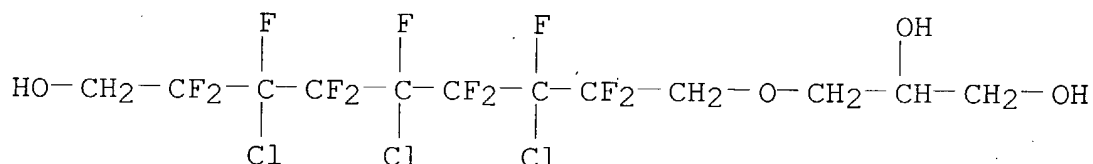


PAGE 1-B



RN 642474-60-0 HCAPLUS

CN 1,2-Propanediol, 3-[(3,5,7-trichloro-2,2,3,4,4,5,6,6,7,8,8-undecafluoro-9-hydroxynonyl)oxy]- (9CI) (CA INDEX NAME)



IC ICM C08F118-00

NCL 526245000; 526249000; 526319000

CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37, 42, 73ST fluorinated carbonate acrylate monomer coating **waveguide**

IT Coating materials

Waveguides

(fluorinated acrylate derivs. having carbonate groups and polymerizable compn. comprising same)

IT 642474-53-1P 642474-54-2P 642474-55-3P 642474-56-4P

642474-58-6P 642474-61-1P 642474-62-2P

642474-63-3P 643013-59-6P

(fluorinated acrylate derivs. having carbonate groups and polymerizable compn. comprising same)

IT 81148-95-0DP, reaction products with acrylic fluoro compds.
642474-54-2DP, reaction products with acrylic fluoro compds.
642474-55-3DP, reaction products with acrylic fluoro compds.
642474-63-3DP, reaction products with acrylic fluoro compds.
642474-64-4P 642474-65-5P 642474-67-7P **642474-68-8P**

642474-69-9P 642474-70-2DP, reaction products with acrylic fluoro compds. 642474-71-3P **642474-72-4P** 642474-73-5P
642474-74-6P 642474-75-7P **642474-77-9P** 643013-60-9P

(fluorinated acrylate derivs. having carbonate groups and polymerizable compn. comprising same)

IT 307-30-2 376-90-9 **814-68-6**, Acryloyl chloride
13695-27-7 30674-80-7 53281-20-2 75609-51-7
129301-42-4 218923-44-5 328119-80-8 **642474-57-5**
642474-59-7 **642474-60-0**

(fluorinated acrylate derivs. having carbonate groups and polymerizable compn. comprising same)

L32 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN
2003:757373 Document No. 139:261638 Curable compositions containing fluorinated ethylenically unsaturated aromatic compound derivatives for optical applications. Blomquist, Robert; Deng, Jian Ming S. (USA). U.S. Pat. Appl. Publ. US 2003181633 A1 20030925, 23 pp., Cont.-in-part of U.S. Ser. No. ¹⁰⁶67,669.. (English). CODEN: USXXCO. APPLICATION: US 2002-253057 20020923. PRIORITY: US 2002-67669 20020204.

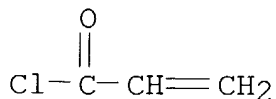
AB An energy curable compn. comprises a compd. comprising (a) an arom. or heteroarom. moiety, (b) at least two fluorinated alkylene, arylene or polyether moieties, each fluorinated alkylene, arylene or polyether moiety being linked to the arom. or heteroarom. moiety through an ether or thioether bond, and (c) at least one ethylenically unsatd. moiety, each ethylenically unsatd. moiety being linked to one of the fluorinated alkylene, arylene or polyether moieties. The compns. of the invention are used to produce optical devices, such as optical **waveguides**. Thus, a fluorinated polyether diol (Fluorolink D 10) (250) was mixed with cyanuric chloride (15), butylated hydroxytoluene (0.25 g), toluene (300 mL), and Et nonafluorobutyl ether (HFE-7200) (300 mL), the mixt. was cooled with ice, and triethylamine (40 mL) was added dropwise with stirring at temp. maintained below 30.degree.. The reaction mixt. was stirred at room temp. overnight, cooled with ice, acryloyl chloride (25 mL) was added dropwise at temp. maintained below 30.degree., and the reaction mixt. was stirred at room temp. for 3 h. The obtained trifunctional acrylate-terminated fluorinated polyether cyanurate was mixed with .alpha.,.alpha.-diethoxyacetophenone (1%) and **UV cured** for 300 s under nitrogen. The refractive index of the cured sample was 1.323 at a wavelength of 1,550 nm.

IT **814-68-6DP**, Acryloyl chloride, reaction products with fluorinated polyether diols and halogenated arom. compds. (curable compns. contg. fluorinated ethylenically unsatd. arom. compd. derivs. for optical applications)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)

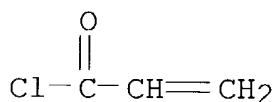
No Common Inventor
No Common Assigner
Coring Inc.
No
D.P.



- IT 330562-44-2
(curable compns. contg. fluorinated ethylenically unsatd. arom. compd. derivs. for optical applications)
- RN 330562-44-2 HCAPLUS
- CN Ethanol, 2,2'-[oxybis[(1,1,2,2-tetrafluoro-2,1-ethanediyl)oxy]]bis[2,2-difluoro- (9CI) (CA INDEX NAME)
- HO-CH₂-CF₂-O-CF₂-CF₂-O-CF₂-CF₂-O-CF₂-CH₂-OH
- IC ICM C08G059-00
- NCL 528407000
- CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 73
- ST fluorinated unsatd arom compd deriv curable compn optical **waveguide**; optical device fluorinated unsatd isocyanurate deriv curable compn
- IT Optical materials
Optical **waveguides**
(curable compns. contg. fluorinated ethylenically unsatd. arom. compd. derivs. for optical applications)
- IT Polymerization
(**photopolymn.**; curable compns. contg. fluorinated ethylenically unsatd. arom. compd. derivs. for optical applications)
- IT 108-77-0DP, Cyanuric chloride, reaction products with fluorinated polyether diols, acrylates 118-74-1DP, Hexachlorobenzene, reaction products with fluorinated polyether diols, acrylates 434-90-2DP, Decafluorobiphenyl, reaction products with fluorinated polyether diols, acrylates **814-68-6DP**, Acryloyl chloride, reaction products with fluorinated polyether diols and halogenated arom. compds. 4628-94-8DP, reaction products with fluorinated polyether diols, acrylates 444023-61-4DP, Fluorolink D 10, reaction products with halogenated arom. compds., acrylates 600754-29-8P 603972-27-6P
(curable compns. contg. fluorinated ethylenically unsatd. arom. compd. derivs. for optical applications)
- IT 118-74-1, Hexachlorobenzene 7757-83-7, Sodium sulfite
330562-44-2
(curable compns. contg. fluorinated ethylenically unsatd. arom.

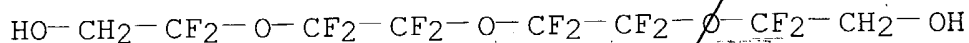
compd. derivs. for optical applications)

- L32 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN
 2003:737403 Document No. 139:261628 Curable compositions containing fluorinated ethylenically unsaturated aromatic compound derivatives for optical applications. Blomquist, Robert; Deng, Jian Ming S. (USA). U.S. Pat. Appl. Publ. US 2003176629 A1 20030918, 21 pp. (English). CODEN: USXXCO. APPLICATION: US 2002-67669 20020204. *Common Assignee.*
- AB An energy curable compn. comprises a compd. comprising (a) an arom. or heteroarom. moiety, (b) at least two fluorinated alkylene, arylene or polyether moieties, each fluorinated alkylene, arylene or polyether moiety being linked to the arom. or heteroarom. moiety through an ether or thioether bond, and (c) at least one ethylenically unsatd. moiety, each ethylenically unsatd. moiety being linked to one of the fluorinated alkylene, arylene or polyether moieties. The compns. of the invention are used to produce optical devices, such as optical **waveguides**. Thus, a fluorinated polyether diol (Fluorolink D 10) (250) was mixed with cyanuric chloride (15), butylated hydroxytoluene (0.25 g), toluene (300 mL), and Et nonafluorobutyl ether (HFE-7200) (300 mL), the mixt. was cooled with ice, and triethylamine (40 mL) was added dropwise with stirring at temp. maintained below 30.degree.. The reaction mixt. was stirred at room temp. overnight, cooled with ice, acryloyl chloride (25 mL) was added dropwise at temp. maintained below 30.degree., and the reaction mixt. was stirred at room temp. for 3 h. The obtained trifunctional acrylate-terminated fluorinated polyether cyanurate was mixed with .alpha.,.alpha.-diethoxyacetophenone (1%) and **UV cured** for 300 s under nitrogen. The refractive index of the cured sample was 1.323 at a wavelength of 1,550 nm.
- IT **814-68-6DP**, Acryloyl chloride, reaction products with fluorinated polyether diols and halogenated arom. compds. (curable compns. contg. fluorinated ethylenically unsatd. arom. compd. derivs. for optical applications)
- RN 814-68-6 HCAPLUS
- CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



- IT **330562-44-2**
 (curable compns. contg. fluorinated ethylenically unsatd. arom. compd. derivs. for optical applications)
- RN 330562-44-2 HCAPLUS
- CN Ethanol, 2,2'-[oxybis[(1,1,2,2-tetrafluoro-2,1-

ethanediyl)oxy]]bis[2,2-difluoro- (9CI) (CA INDEX NAME)



IC ICM C08G073-24

NCL 528401000

CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 73

ST fluorinated unsatd arom compd deriv curable compn optical device;
optical **waveguide** fluorinated unsatd isocyanurate deriv
curable compn

IT Optical materials
Optical **waveguides**

(curable compns. contg. fluorinated ethylenically unsatd. arom.
compd. derivs. for optical applications)

IT Polymerization
(**photopolymer.**; curable compns. contg. fluorinated
ethylenically unsatd. arom. compd. derivs. for optical
applications)

IT 108-77-0DP, Cyanuric chloride, reaction products with fluorinated
polyether diols, acrylates 118-74-1DP, Hexachlorobenzene, reaction
products with fluorinated polyether diols, acrylates 434-90-2DP,
Decafluorobiphenyl, reaction products with fluorinated polyether
diols, acrylates **814-68-6DP**, Acryloyl chloride, reaction
products with fluorinated polyether diols and halogenated arom.
compds. 4628-94-8DP, reaction products with fluorinated polyether
diols, acrylates 444023-61-4DP, Fluorolink D 10, reaction products
with halogenated arom. compds., acrylates 600754-29-8P
(curable compns. contg. fluorinated ethylenically unsatd. arom.
compd. derivs. for optical applications)

IT **330562-44-2**
(curable compns. contg. fluorinated ethylenically unsatd. arom.
compd. derivs. for optical applications)

L32 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN

2003:610441 Document No. 139:165086 Monomer with antimicrobial
character, polymer, manufacturing method, and medical use. Moon,
Woong-Sig; Chung, Kyoo-Hyun; Kim, Jae-Chul; Lee, Hyung-Goo; Kong,
Ki-Oh; Kim, Jung-Chul; Hwang, Jung-Hwa (Micro Science Tech Co.,
Ltd., S. Korea). PCT Int. Appl. WO 2003064412 A1 20030807, 91 pp.
DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR,
BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ,
UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW; RW: AT, BE, BF, BJ, CF, CG,

CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN, TD, TG, TR. (English). CODEN: PIXXD2.

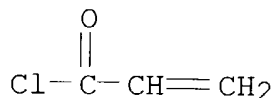
APPLICATION: WO 2003-KR238 20030203. PRIORITY: KR 2002-5728 20020131; KR 2002-35792 20020625; KR 2003-6509 20030203.

AB The antimicrobial monomer comprises a (un)satd. hydrocarbon having a polymerizable functional group and **light-curable** functional group within its structure. The monomer compds. have durable antimicrobial activity and high heat resistance, they do not give rise to toxicity when added to conventional resins by not eluting the antimicrobial compds., and they do not have an effect on the properties of molded products. The monomer 1-ethyl-6-fluoro-1,4-dihydro-7-[4-(2-hydroxy-6-methyl-4-oxa-5-oxo-6-heptenyl)-1-piperazinyl]-4-oxo-3-quinoline carboxylic acid (prepn. given) was polymd. in the presence of AIBN at 70.degree. for 4 h.

IT **814-68-6**, Acryloylchloride **920-46-7**, Methacryloyl chloride
(in prepn. of monomer for antimicrobial polymer)

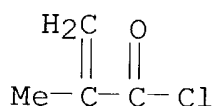
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

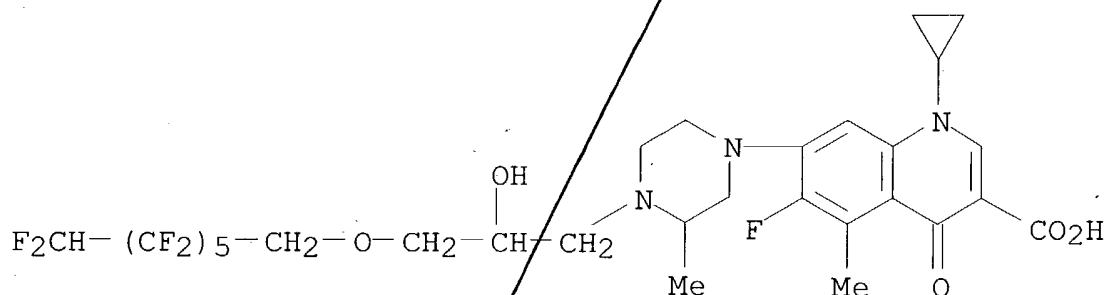


IT **574758-79-5P**

(prepn. and polymn.; in prepn. of monomer for antimicrobial polymer)

RN 574758-79-5 HCAPLUS

CN 3-Quinolinecarboxylic acid, 1-cyclopropyl-7-[4-[3-[(2,2,3,3,4,4,5,5,6,6,7,7-dodecafluoroheptyl)oxy]-2-hydroxypropyl]-3-methyl-1-piperazinyl]-6-fluoro-1,4-dihydro-5-methyl-4-oxo- (9CI)
(CA INDEX NAME)



IC ICM C07D403-10

CC 35-4 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 28, 42, 63

IT 574758-96-6P 574758-97-7P 577746-73-7P 577746-74-8P

577746-75-9P 577746-76-0P

(UV-curable binder; antimicrobial polymer
coating on polycarbonate substrate)

IT 106-91-2, Glycidyl methacrylate 799-34-8 **814-68-6**,

Acryloylchloride **920-46-7**, Methacryloyl chloride

1592-20-7, 4-Vinylbenzyl chloride 2211-94-1, Glycidyl

4-methoxyphenyl ether 3568-29-4, Glycerol 1,3-diglycidyl ether

6178-32-1, Glycidyl 4-nonylphenyl ether 6746-81-2, Glycidyl
tosylate

(in prepn. of monomer for antimicrobial polymer)

IT 188677-42-1P 574758-74-0P 574758-75-1P 574758-76-2P

574758-77-3P 574758-78-4P **574758-79-5P** 574758-80-8P

574758-81-9P 574758-82-0P 574758-83-1P 574758-84-2P

574758-85-3P 574758-86-4P

(prepn. and polymn.; in prepn. of monomer for antimicrobial
polymer)

L32 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN

2003:512118 Document No. 139:86096 **Photosensitive** polymers

having high transmittance and improved dry etching resistance and
chemically amplified resist compositions containing the same. Choi,
Sang-jun; Moon, Joo-tae; Woo, Sang-gyun; Yoon, Kwang-sub; Song,
Ki-yong (Samsung Electronics Co., Ltd., S. Korea). U.S. Pat. Appl.
Publ. US 2003125511/A1 20030703, 9 pp. (English). CODEN: USXXCO.
APPLICATION: US 2002-289108 20021105. PRIORITY: KR 2001-69228
20011107.

AB The **photosensitive** polymer with wt. av. mol. wt.
3,000-50,000, useful for fabrication of semiconductors, contains a
repeating unit $-\text{[CH}_2\text{C(R}_1\text{)(COOR}_2\text{)]}-$ ($\text{R}_1 = \text{H, Me}$; and $\text{R}_2 =$ fluorinated
ethylene glycol group having 3-10 carbon atoms). Thus, a resist
compn. comprised 1.0 g copolymer of tert-Bu methacrylate and
1,1-dihydro-3,6-dioxaperfluoroheptyl methacrylate (prepd. by

reaction of methacryloyl chloride and fluorinated diethylene glycol monomethyl ether), 8 g polyethylene glycol Me ether acetate, 0.02 g triphenylsulfonium triflate and 2 mg triisobutylamine.

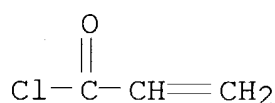
IT 814-68-6, 2-Propenoyl chloride 920-46-7

147492-57-7 330562-43-1

(starting material; prepn. of **photosensitive** polymers having high transmittance and improved dry etching resistance for chem. amplified resist compns.)

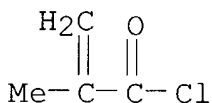
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



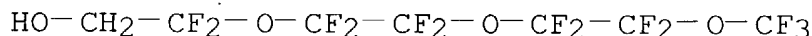
RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



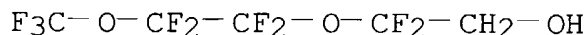
RN 147492-57-7 HCAPLUS

CN Ethanol, 2,2-difluoro-2-[1,1,2,2-tetrafluoro-2-[1,1,2,2-tetrafluoro-2-(trifluoromethoxy)ethoxy]ethoxy]- (9CI) (CA INDEX NAME)



RN 330562-43-1 HCAPLUS

CN Ethanol, 2,2-difluoro-2-[1,1,2,2-tetrafluoro-2-(trifluoromethoxy)ethoxy]- (9CI) (CA INDEX NAME)



IC ICM C08G073-24

ICS C08F114-18; C08F014-18

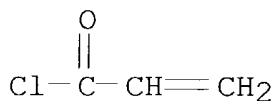
NCL 528401000; 528271000; 525242000; 525276000; 525326200; 525330700

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 74, 76

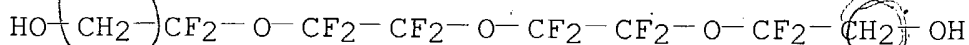
ST dihydrodioxaperfluoroheptyl methacrylate polymer

- photosensitive** prepn resist
IT **Light-sensitive** materials
Photoresists
(prepn. of **photosensitive** polymers having high transmittance and improved dry etching resistance for chem. amplified resist compns.)
- IT 129888-38-6P 129905-78-8P 131742-39-7P 131755-30-1P
(prepn. of **photosensitive** polymers having high transmittance and improved dry etching resistance for chem. amplified resist compns.)
- IT 552886-60-9P 552886-61-0P 552886-62-1P 552886-63-2P
552886-64-3P 552886-65-4P 552886-66-5P
(prepn. of **photosensitive** polymers having high transmittance and improved dry etching resistance for chem. amplified resist compns.)
- IT 814-68-6, 2-Propenoyl chloride 920-46-7
147492-57-7 330562-43-1
(starting material; prepn. of **photosensitive** polymers having high transmittance and improved dry etching resistance for chem. amplified resist compns.)
- L32 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN
2002:591787 Document No. 137:147580 **Photosensitive** acrylate composition and **waveguide** device. Wang, Fang; Xu, Chuck C.; Xu, Baopei; Pottebaum, Indira S.; Pant, Deepti; Osuch, Chris E.; Eldada, Louay A. (Telephotonics, Inc., USA). Eur. Pat. Appl. EP 1229352 A2 20020807; 17 pp. DESIGNATED STATES: R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR. (English). CODEN: EPXXDW. APPLICATION: EP 2002-75392 20020130. PRIORITY: US 2001-PV265765 20010201; US 2002-PV50186 20020118.
- AB **Photosensitive** compns. are described which comprise .gtoreq.1 fluorinated, non-urethane contg. multifunctional acrylate prepd. from .gtoreq.1 multifunctional alc., the alc. being synthesized from a core mol. having .gtoreq.2 equiv. of hydroxy-reacting functional groups and a fluorinated mol. having at least two hydroxyl groups; and .gtoreq.1 **photoinitiator**. **Waveguide** devices fabricated by patterning the **photosensitive** compns., and methods for fabricating **waveguide** devices entailing patterning the **photosensitive** compns., are also described.
- IT 814-68-6, Acryloyl chloride 330562-44-2
(**photosensitive** acrylate compns. and **waveguide** devices and their fabrication using the compns.)
- RN 814-68-6 HCAPLUS
CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 330562-44-2 HCAPLUS

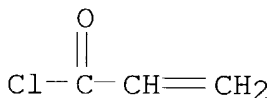
CN Ethanol, 2,2'-[oxybis[(1,1,2,2-tetrafluoro-2,1-ethanediyl)oxy]]bis[2,2-difluoro- (9CI) (CA INDEX NAME)



IT **814-68-6DP**, Acryloyl chloride, esters with perfluoro polyether diol polycarboxylic acid ester **444888-18-0P** (photosensitive acrylate compns. and waveguide devices and their fabrication using the compns.)

RN 814-68-6 HCAPLUS

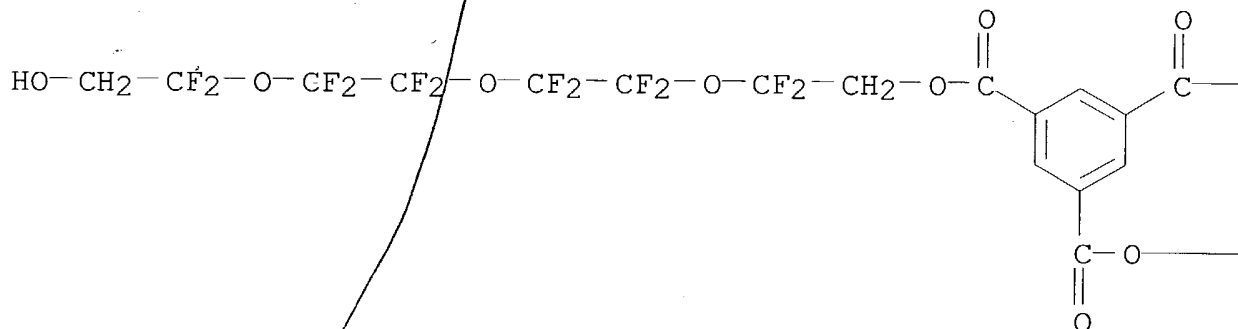
CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



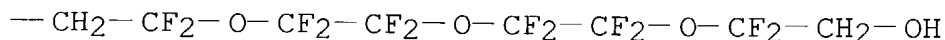
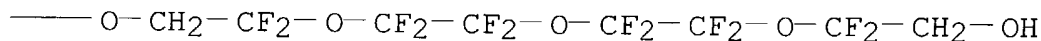
RN 444888-18-0 HCAPLUS

CN 1,3,5-Benzenetricarboxylic acid, tris[2-[2-[2-(1,1-difluoro-2-hydroxyethoxy)-1,1,2,2-tetrafluoroethoxy]-1,1,2,2-tetrafluoroethoxy]-2,2-difluoroethyl] ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



- IC ICM G02B001-04
ICS G02B006-12; C08F220-24
- CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)
Section cross-reference(s): 38
- ST **photosensitive** acrylate compn **waveguide** device
- IT Polyethers, uses
(perfluoro, acrylated derivs.; **photosensitive** acrylate compns. and **waveguide** devices and their fabrication using the compns.)
- IT Optical **waveguides**
Photoresists
(**photosensitive** acrylate compns. and **waveguide** devices and their fabrication using the compns.)
- IT Fluoropolymers, uses
(polyether-, perfluoro, acrylated derivs.; **photosensitive** acrylate compns. and **waveguide** devices and their fabrication using the compns.)
- IT 1703-58-8DP, 1,2,3,4-Butanetetracarboxylic acid, esters with perfluoro polyether diol, acrylated
(**photosensitive** acrylate compns. and **waveguide** devices and their fabrication using the compns.)
- IT 121-44-8, Triethylamine, reactions 528-44-9, 1,2,4-Benzenetricarboxylic acid 632-56-4 **814-68-6**, Acryloyl chloride 1703-58-8, 1,2,3,4-Butanetetracarboxylic acid 2672-58-4, Trimethyl-1,3,5-benzenetricarboxylate 4422-95-1, 1,3,5-Benzenetricarbonyl trichloride 7087-68-5, Diisopropylethylamine **330562-44-2** 444023-61-4, Fluorolink D 10
(**photosensitive** acrylate compns. and **waveguide** devices and their fabrication using the compns.)
- IT **814-68-6DP**, Acryloyl chloride, esters with perfluoro polyether diol polycarboxylic acid ester 4422-95-1DP, 1,3,5-Benzenetricarbonyl chloride, esters with perfluoro polyether diol, acrylated 444023-61-4DP, Fluorolink D 10, reaction products

with benzenepolycarboxylic chloride and acryloyl chloride

444888-18-0P 444888-19-1P

(**photosensitive** acrylate compns. and **waveguide**
devices and their fabrication using the compns.)

IT 7473-98-5, Darocur 1173 189146-15-4, Darocur 4265

(**photosensitive** acrylate compns. contg.)

L32 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN

2001:94050 Document No. 134:148358 High strength polymeric networks from (meth)acrylate resins with high fluorine content and process for preparing same. Stansbury, Jeffrey W.; Antonucci, Joseph M.; Choi, Kyung M. (United States of America as Represented by the Secretary of the Commerce, USA). U.S. US 6184339 B1 20010206, 35 pp. (English). CODEN: USXXAM. APPLICATION: US 1997-967896 19971112. PRIORITY: US 1996-PV30911 19961114.

AB Disclosed are fluorinated materials for use in dental uses and non-dental uses, e.g., adhesives or coatings. Multifunctional monomers and prepolymers with pendant (meth)acrylate groups were prepd. from epoxide ring-opening reactions. Resins based on the fluorinated monomers and prepolymers with diluent comonomers, were **photocured** as composites with particulate fillers. Fluorine contents of the prepolymers ranged from 15 to 65%. Composites with high transverse strength (up to 120 MPa), low water sorption (as low as 0.11 mass %) and extremely low polymn. shrinkage (as low as 3.4% by vol.) were obtained. The fluorinated resins may be employed to produce hydrophobic dental composite materials with high strength and low polymn. shrinkage. A composite was prepd. from a monomer prepd. from DER 332, heptafluoro-1-butanol and acryloyl chloride, 1,10-decamethylene glycol dimethacrylate, and quartz and glass fillers.

IT 324047-38-3P 324047-39-4P 324047-41-8P

324047-49-6P 324518-26-5P, 1,3-Bis(hexafluoro-2-hydroxypropyl)benzene diglycidyl ether .alpha.,.alpha.,.alpha.',.alpha ha.'-tetrakis(trifluoromethyl)-1,3-benzene-dimethanol copolymer methacrylate 324518-28-7P, 1,3-Bis(hexafluoro-2-hydroxypropyl)-5-perfluorohexyl benzene diglycidyl ether .alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)-1,3-benzene-dimethanol copolymer methacrylate 324518-30-1P, 1,3-Bis(hexafluoro-2-hydroxypropyl)-5-perfluorooctylbenzene diglycidyl ether .alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)-1,3-benzene-dimethanol copolymer methacrylate

(high strength polymeric networks from (meth)acrylate resins with high fluorine content and process for prepg. same)

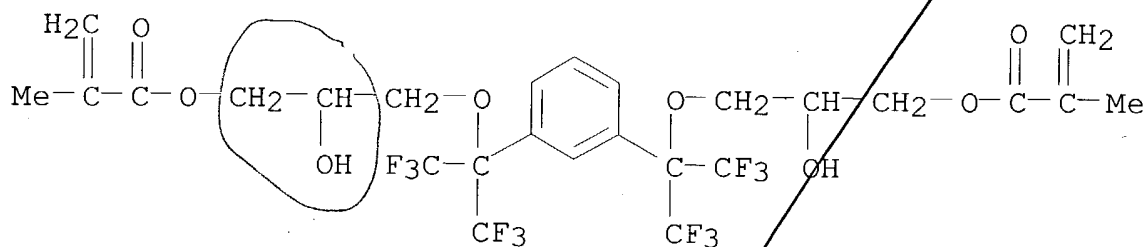
RN 324047-38-3 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,3-phenylenebis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with DDI (isocyanate) (9CI) (CA INDEX NAME)

CM 1

CRN 122715-23-5

CMF C26 H26 F12 O8



CM 2

CRN 39340-26-6

CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 324047-39-4 HCAPLUS

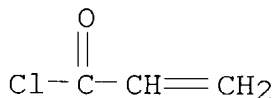
CN 2-Propenoic acid, 2-methyl-, [5-(heptadecafluorooctyl)-1,3-phenylene]bis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxy(2-hydroxy-3,1-propanediyl)] ester, polymer with DDI (isocyanate) (9CI)
(CA INDEX NAME)

CM 1

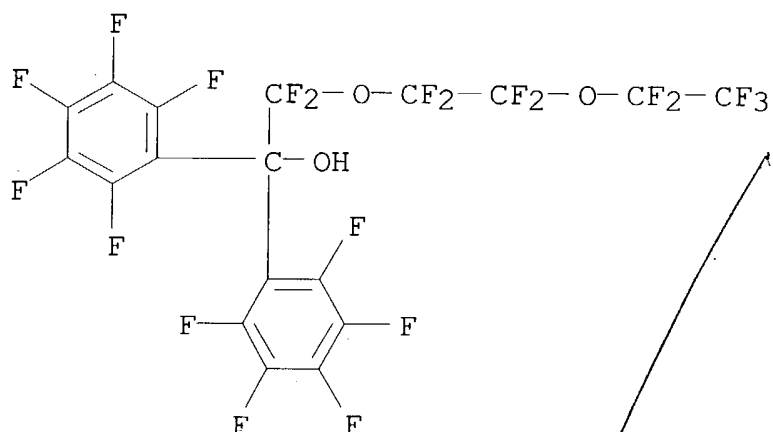
CRN 124006-07-1

CMF C34 H25 F29 O8

IT 814-68-6, Acryloyl chloride
 (high strength polymeric networks from (meth)acrylate resins with
 high fluorine content and process for prepg. same)
 RN 814-68-6 HCAPLUS
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)

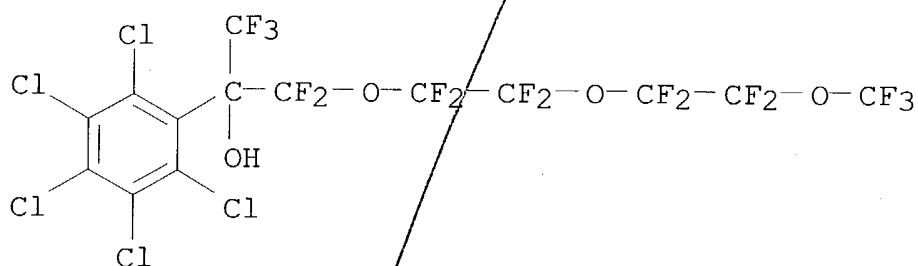


IC ICM C08F002-48
 ICS C08J006-08; C08K002-00; C08G065-00
 NCL 528407000
 CC 37-3 (Plastics Manufacture and Processing)
 Section cross-reference(s): 63
 IT 324047-35-0P 324047-36-1P 324047-37-2P **324047-38-3P**
324047-39-4P 324047-41-8P 324047-42-9P
324047-49-6P 324518-26-5P, 1,3-Bis(hexafluoro-2-
 hydroxypropyl)benzene diglycidyl ether .alpha.,.alpha.,.alpha.',.alp
 ha.'-tetrakis(trifluoromethyl)-1,3-benzene-dimethanol copolymer
 methacrylate **324518-28-7P**, 1,3-Bis(hexafluoro-2-
 hydroxypropyl)-5-perfluorohexyl benzene diglycidyl ether
 .alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)-1,3-
 benzene-dimethanol copolymer methacrylate **324518-30-1P**,
 1,3-Bis(hexafluoro-2-hydroxypropyl)-5-perfluorooctylbenzene
 diglycidyl ether .alpha.,.alpha.,.alpha.',.alpha.'-
 tetrakis(trifluoromethyl)-1,3-benzene-dimethanol copolymer
 methacrylate
 (high strength polymeric networks from (meth)acrylate resins with
 high fluorine content and process for prepg. same)
 IT **194919-68-1P 194919-75-0P 324047-43-0P**
 324047-44-1P 324047-46-3P **324047-47-4P 324047-48-5P**
324518-31-2P 324518-32-3P 324518-33-4P
 (high strength polymeric networks from (meth)acrylate resins with
 high fluorine content and process for prepg. same)
 IT 375-01-9, 1H,1H-Heptafluoro-1-butanol 802-93-7 **814-68-6**,
 Acryloyl chloride 25085-99-8, DER 332 28768-32-3, 4,4'-Methylene
 bis(N,N-diglycidylaniline) 30674-80-7, 2-Isocyanatoethyl
 methacrylate 33294-14-3, DER 542 35655-79-9,
 Heptafluoro-1-butanol 85567-21-1
 (high strength polymeric networks from (meth)acrylate resins with
 high fluorine content and process for prepg. same)



RN 217825-05-3 HCAPLUS

CN Benzenemethanol, 2,3,4,5,6-pentachloro-.alpha.-[difluoro[1,1,2,2-tetrafluoro-2-[1,1,2,2-tetrafluoro-2-(trifluoromethoxy)ethoxy]ethoxy]methyl]-.alpha.-(trifluoromethyl)- (9CI) (CA INDEX NAME)

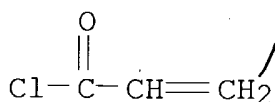


IT 814-68-6, Acryloyl chloride

(halogenated acrylates and polymers derived therefrom)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM C07C069-653

ICS C07D213-64; C07D213-66; C07D213-68; C07D213-70; C08F020-22;
C08F020-24; C07C041-22; C07C049-167; C07C049-175

CC 35-2 (Chemistry of Synthetic High Polymers)

IT 727-49-1P, Heptafluoro-2-naphthol 3354-82-3P,

Tribromophloroglucinol 14055-49-3P 22577-86-2P 217824-92-5P
217824-93-6P 217824-95-8P 217824-97-0P
217825-01-9P 217825-05-3P 217825-07-5P 217825-86-0P
217825-95-1P 217960-26-4P

(halogenated acrylates and polymers derived therefrom)

IT 56-81-5, 1,2,3-Propanetriol, reactions 75-56-9, reactions
111-77-3, Methylcarbitol 115-20-8, Trichloroethanol 118-74-1,
Hexachlorobenzene 313-72-4, Octafluoronaphthalene 319-88-0,
1,3,5-Trichlorotrifluorobenzene 335-84-2 344-04-7,
Bromopentafluorobenzene 344-07-0, Chloropentafluorobenzene
434-64-0, Octafluorotoluene 488-47-1, Tetrabromocatechol
771-61-9, Pentafluorophenol 771-62-0, Pentafluorothiophenol
814-68-6, Acryloyl chloride 853-39-4,
Decafluorobenzophenone 999-97-3, Hexamethyldisilazane 1898-91-5,
Perfluorocyclohexanone 2437-49-2, 2,4,6-Tribromoresorcinol
6099-90-7, Phloroglucinol dihydrate 13071-64-2 13071-65-3
25265-75-2, Butanediol 66443-85-4, Perfluoro-2-octanone
217825-89-3

(halogenated acrylates and polymers derived therefrom)

L32 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN

1996:689390 Document No. 126:36966 New Families of

Photocurable Oligomeric Fluoromonomers for Use in Dental
Composites. Choi, Kyung M.; Stansbury, Jeffrey W. (Polymers
Division, National Institute of Standards and Technology,
Gaithersburg, MD, 20899, USA). Chemistry of Materials, 8(12),
2704-2707 (English) 1996. CODEN: CMATEX. ISSN: 0897-4756.
Publisher: American Chemical Society.

AB Several types of moderately to highly fluorinated methacrylate-based
monomers with the initial intent of identifying new fluoropolymers
that exhibit low polymn. shrinkage along with excellent
hydrophobicity and phys. strength are examd. In general, the phys.
strength of polymers rich in fluorine was reduced with increasing
fluorine content due to the low cohesive energy assocd. with
amorphous fluoropolymers.

IT 184590-40-7P 184590-41-8P 184590-42-9P

(new families of **photocurable** oligomeric fluoromonomers
for use in dental composites)

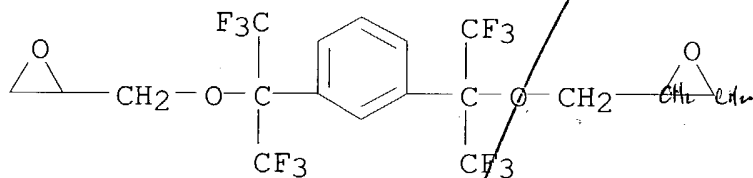
RN 184590-40-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 1,10-decanediyl ester, polymer with
2-methyl-2-propenoyl chloride, 2,2'-[1,3-phenylenebis[[2,2,2-
trifluoro-1-(trifluoromethyl)ethylidene]oxymethylene]]bis[oxirane]
and .alpha.,.alpha.,.alpha.',.alpha.'-tetrakis(trifluoromethyl)-1,3-
benzenedimethanol (9CI) (CA INDEX NAME)

CM 1

CRN 26146-93-0

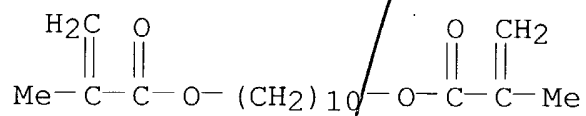
CMF C18 H14 F12 O4



CM 2

CRN 6701-13-9

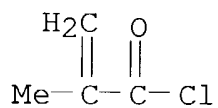
CMF C18 H30 O4



CM 3

CRN 920-46-7

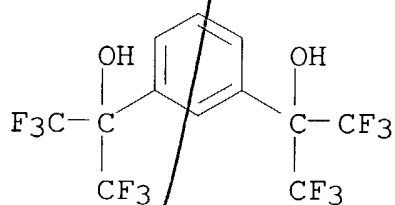
CMF C4 H5 Cl O



CM 4

CRN 802-93-7

CMF C12 H6 F12 O2



184590-41-8P 184590-42-9P

(new families of **photocurable** oligomeric fluoromonomers for use in dental composites)

IT **814-68-6**, Acryloyl chloride 1675-54-3 3072-84-2
(new families of **photocurable** oligomeric fluoromonomers for use in dental composites)

IT **42263-56-9P 184590-29-2P 184590-30-5P**
184590-31-6P 184590-32-7P **184590-35-0P**
184590-36-1P 184590-37-2P 184590-38-3P
184590-39-4P

(new families of **photocurable** oligomeric fluoromonomers for use in dental composites)

IT 375-01-9P, 1-Butanol, 2,2,3,3,4,4,4-heptafluoro
(new families of **photocurable** oligomeric fluoromonomers for use in dental composites)

L32 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2004 ACS on STN

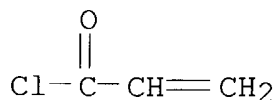
1990:56957 Document No. 112:56957 Polymerizable fluorine-containing aromatic compounds. Washimi, Akira; Yoshida, Masao; Kimura, Kaoru (Toa Gosei Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01199937 A2 19890811 Heisei, 15 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-258965 19881014. PRIORITY: JP 1987-257100 19871014.

AB The compds. have the general formula $m\text{-R}_1(\text{OC}_3\text{H}_6)\text{mOC}(\text{CF}_3)_2\text{C}_6\text{H}_4\text{C}(\text{CF}_3)_2\text{O}(\text{C}_3\text{H}_6\text{O})\text{nR}_2$ ($\text{R}_1, \text{R}_2 = \text{H}$, acryloyl, methacryloyl; $m, n = 1-10$). $m\text{-C}_6\text{H}_4[\text{C}(\text{CF}_3)_2\text{OH}]_2$ was condensed with propylene oxide and then esterified with $\text{CH}_2\text{:CHCOCl}$ to give $m\text{-C}_6\text{H}_4[\text{C}(\text{CF}_3)_2\text{OC}_3\text{H}_6\text{O}_2\text{CCH:CH}_2]_2$. UV irradiation of this product containing 3-4 mol% PhCOCHMeOH spread on a glass plate gave a polymer with refractive index 1.4508, water contact angle 90.3.degree., and glass-transition temp. 121.degree..

IT **814-68-6**, 2-Propenoyl chloride **920-46-7**
(esterification of, with fluorine-containing arom. alcs.)

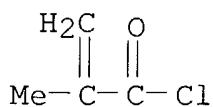
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

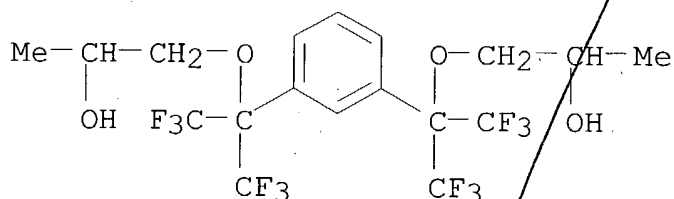


IT 125010-51-7P 125010-54-0P 125086-44-4P

(prepn. and esterification of)

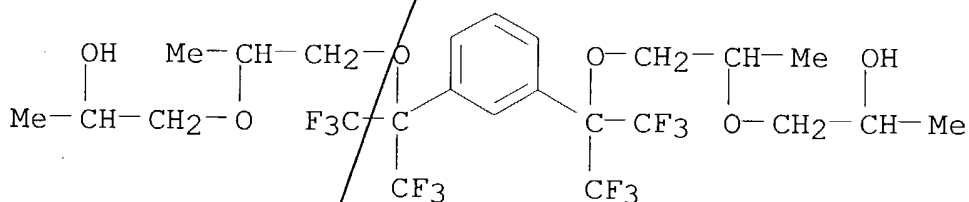
RN 125010-51-7 HCAPLUS

CN 2-Propanol, 1,1'-[1,3-phenylenebis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxy]]bis- (9CI) (CA INDEX NAME)



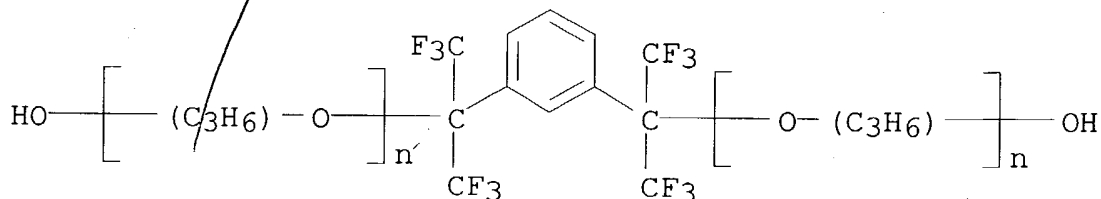
RN 125010-54-0 HCAPLUS

CN 2-Propanol, 1,1'-[1,3-phenylenebis[[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]oxy(1-methyl-2,1-ethanediyl)oxy]]bis- (9CI) (CA INDEX NAME)



RN 125086-44-4 HCAPLUS

CN Poly[oxy(methyl-1,2-ethanediyl)], .alpha.,.alpha.'-[1,3-phenylenebis[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]]bis[.omega-ga.-hydroxy- (9CI) (CA INDEX NAME)]



IC ICM C07C069-653
CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 25
ST fluorine contg arom acrylic polymer; **photopolymerizable**
fluorine contg arom acrylate
IT **814-68-6**, 2-Propenoyl chloride **920-46-7**
(esterification of, with fluorine-contg. arom. alcs.)
IT 125010-53-9P 125086-45-5P 125086-46-6P
(manuf. of **photopolymerizable**)
IT **125010-51-7P 125010-54-0P 125086-44-4P**
(prepn. and esterification of)
IT 125010-52-8P
(prepn. of **photopolymerizable**)

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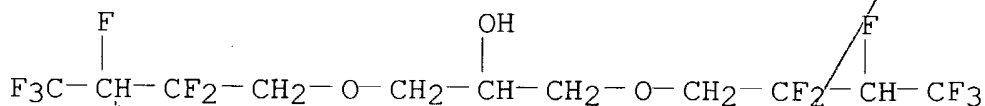
L38 ANSWER 1 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
2002:978064 Document No. 138:57436 Fluorine-containing compounds and
their polymers useful in compositions for treating textile
substrates. Bradley, David; Ma, Jing-Ji; Nalewajek, David; Samuels,
George J.; Stachura, Leonard M.; Van der Puy, Michael (Honeywell
International Inc., USA). PCT Int. Appl. WO 2002103103 A2 20021227,
27 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB,
BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE,
ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP,
KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN,
TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ,
MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK,
ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR, NE, NL, PT, SE, SN,
TD, TG, TR. (English). CODEN: PIXXD2. APPLICATION: WO
2002-US19232 20020618. PRIORITY: US 2001-PV299083 20010618.

AB A fluoropolymer is derived from a fluorine-contg. compds.
CH₂:C(R₁)COO(YO)aCR₂R₃CF₂CHF₂CF₃ (R₁, R₂, R₃ = h, lower alkyl; Y =
divalent org. moiety; and a = 0, 1). A compn. contg. the
fluoropolymer imparts water or oil repellency to a substrate. Thus,
2,2,3,4,4,4-hexafluorobutyl acrylate homopolymer soln. was applied
onto a glass slide and dried to give a film showing contact angle
with oil 77.7 and good oil repellency.

IT **479068-76-3P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); **RACT (Reactant or reagent)**
(intermediate; prepn. of fluoropolymers useful in compns. for
treating textile substrates)

RN 479068-76-3 HCAPLUS

CN 2-Propanol, 1,3-bis(2,2,3,4,4,4-hexafluorobutoxy)- (9CI) (CA INDEX NAME)



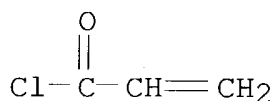
IT 814-68-6, 2-Propenoyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(starting material; prepn. of fluoropolymers useful in compns. for treating textile substrates)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM D06M

CC 40-9 (Textiles and Fibers)

IT 479068-76-3P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**

(intermediate; prepn. of fluoropolymers useful in compns. for treating textile substrates)

IT 79-10-7, Acrylic acid, reactions 96-23-1 382-31-0

814-68-6, 2-Propenoyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(starting material; prepn. of fluoropolymers useful in compns. for treating textile substrates)

L38 ANSWER 2 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:778001 Document No. 137:295611 Process for producing acrylic fluoropolymers and their derivatives use as coatings. Shirakawa, Daisuke; Okazoe, Takashi; Maekawa, Takashige; Oharu, Kazuya; Unoki, Masao (Asahi Glass Company, Limited, Japan). PCT Int. Appl. WO 2002079274 A1 20021010, 47 pp. DESIGNATED STATES: W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM; RW: AT, BE, BF, BJ, CF, CG, CH, CI, CM, CY, DE, DK, ES, FI, FR, GA, GB, GR, IE, IT, LU, MC, ML, MR,

NE, NL, PT, SE, SN, TD, TG, TR. (Japanese). CODEN: PIXXD2.
APPLICATION: WO 2002-JP3213 20020329. PRIORITY: JP 2001-101137
20010330; JP 2001-101138 20010330; JP 2001-198582 20010629; JP
2001-202346 20010703.

AB The process comprises polymg. partially fluorinated monomers having
.gtoreq.1 C-F and .gtoreq.1 C-H units [e.g.,
F(CF₂)₄CH₂CH₂OCOCH:CH₂], and optionally a comonomer; and
fluorinating the partially fluorinated polymer in a fluorination
solvent [e.g., R 113 (1,1,2-trichloro-1,2,2-trifluoroethane)] to
substitute .gtoreq.1 carbon-bonded hydrogen atoms of the partially
fluorinated polymer with fluorine atoms. Fluoropolymers are
produced in the process have a fluorine content regulated to a
desired value and low surface energy characteristics.

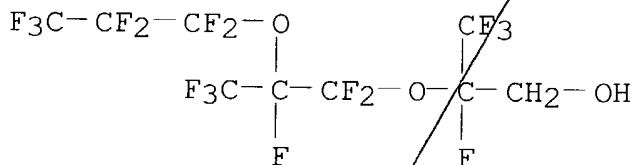
IT 14548-74-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); **RACT (Reactant or reagent)**

(intermediate; process for producing acrylic fluoropolymers and
their derivs. use as coatings)

RN 14548-74-4 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-
(heptafluoropropoxy)propoxy]- (9CI) (CA INDEX NAME)



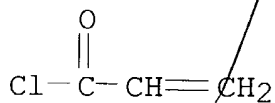
IT 814-68-6, Acrylic acid chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(starting material; process for producing acrylic fluoropolymers
and their derivs. use as coatings)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM C08F008-24

ICS C08F020-22; C08L033-16; C09D133-16

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 42

IT 1799-84-4P 1996-88-9P 14548-74-4P 17559-01-2P

17741-60-5P 26338-99-8P 27905-45-9P 31763-59-4P 45115-53-5P
52591-27-2P 70142-49-3P 74049-08-4P 95243-53-1P 121751-83-5P
468732-52-7P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); **RACT (Reactant or reagent)**

(intermediate; process for producing acrylic fluoropolymers and
their derivs. use as coatings)

IT 79-10-7, Acrylic acid, reactions 79-41-4, Methacrylic acid,
reactions 422-05-9 678-39-7 **814-68-6**, Acrylic acid
chloride 865-86-1 2043-47-2 2641-34-1

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(starting material; process for producing acrylic fluoropolymers
and their derivs. use as coatings)

L38 ANSWER 3 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

2002:573357 Document No. 137:141929 Hyper-branched fluorinated
multifunctional alcohols and their derivatives for production of
transparent coatings. Wang, Fang; Xu, Chuck C.; Xu, Baopei;
Potterbaum, Indira (Telephotonics, Inc., USA). Eur. Pat. Appl. EP
1227076 A2 20020731, 12 pp. DESIGNATED STATES: R: AT, BE, CH, DE,
DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI,
RO, MK, CY, AL, TR. (English). CODEN: EPXXDW. APPLICATION: EP
2002-1749 20020125. PRIORITY: US 2001-PV264200 20010125; US
2002-PV50184 20020118.

AB A fluorinated multifunctional alc. is synthesized from at least one
core mol. having at least three equiv. of hydroxy-reacting
functional groups and at least one fluorinated mol. having at least
two hydroxyl groups. The fluorinated alcs. react further to produce
multifunctional derivs., such as acrylates, epoxides or vinyl
ethers, useful in prepn. of transparent coatings. Thus, a mixt. of
multifunctional fluorinated alcs. was prepd. by reacting
1,3,5-benzenetricarbonyl trichloride (1 equiv) and
1H,1H,8H,8H-perfluorotetraethylene glycol (4.5 equiv) at room temp.
for 2 h in the presence of triethylamine. Acryloyl chloride was
added to this mixt., and the reaction was carried out for 10 h at
room temp. in the presence of diisopropylethylamine to afford
acrylate macromonomers. The acrylates were mixed with benzoyl
peroxide (0.5%), coated on a silicon substrate and heated at
90.degree. for 2 h to form a thin transparent film.

IT **444023-79-4P**

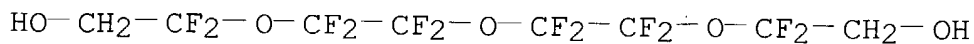
RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); **RACT (Reactant or reagent)**

(hyper-branched fluorinated multifunctional alcs. and their
derivs. for prodn. of transparent coatings)

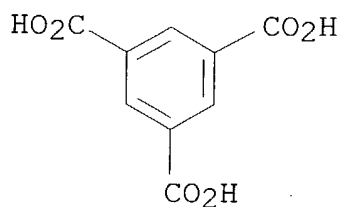
RN 444023-79-4 HCAPLUS

CN 1,3,5-Benzenetricarboxylic acid, ester with 2,2'-[oxybis[(1,1,2,2-
tetrafluoro-2,1-ethanediyl)oxy]]bis[2,2-difluoroethanol] (9CI) (CA
INDEX NAME)

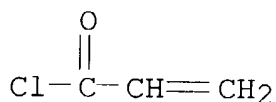
CM 1

CRN 330562-44-2
CMF C8 H6 F12 O5

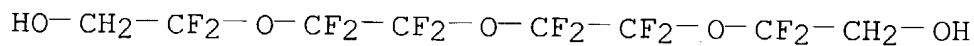
CM 2

CRN 554-95-0
CMF C9 H6 O6

IT **814-68-6**, Acryloyl chloride **330562-44-2**
 RL: RCT (Reactant); **RACT (Reactant or reagent)**
 (in prodn. of hyper-branched fluorinated multifunctional alcs.
 and their derivs. for transparent coatings)
 RN 814-68-6 HCAPLUS
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 330562-44-2 HCAPLUS
 CN Ethanol, 2,2'-[oxybis[(1,1,2,2-tetrafluoro-2,1-ethanediyl)oxy]]bis[2,2-difluoro- (9CI) (CA INDEX NAME)



IT **444023-80-7P**
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation); **RACT (Reactant or reagent)**

(monomer; hyper-branched fluorinated multifunctional alcs. and their derivs. for prodn. of transparent coatings)

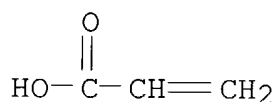
RN 444023-80-7 HCAPLUS

CN 1,3,5-Benzenetricarboxylic acid, ester with 2,2'-[oxybis[(1,1,2,2-tetrafluoro-2,1-ethanediyl)oxy]]bis[2,2-difluoroethanol], 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 79-10-7

CMF C3 H4 O2



CM 2

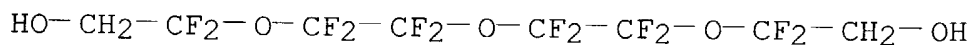
CRN 444023-79-4

CMF C9 H6 O6 . x C8 H6 F12 O5

CM 3

CRN 330562-44-2

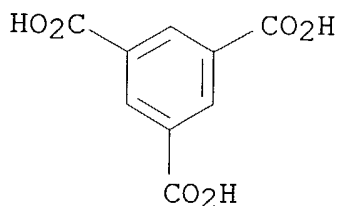
CMF C8 H6 F12 O5



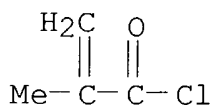
CM 4

CRN 554-95-0

CMF C9 H6 O6



- IC ICM C07C067-08
ICS C07C067-14; C07C069-76; C07C069-54; C09D004-00; C07C069-63;
C07C069-653; C07C069-80
- CC 42-10 (Coatings, Inks, and Related Products)
- IT **444023-79-4P** 444023-81-8P 444023-84-1P 444023-85-2P
444023-87-4P 444023-89-6P
RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); **RACT (Reactant or reagent)**
(hyper-branched fluorinated multifunctional alcs. and their
derivs. for prodn. of transparent coatings)
- IT 89-32-7, 1,2,4,5-Benzenetetracarboxylic acid dianhydride 528-44-9,
1,2,4-Benzenetricarboxylic acid 632-56-4 **814-68-6**,
Acryloyl chloride 1703-58-8, 1,2,3,4-Butanetetracarboxylic acid
2672-58-4, 1,3,5-Benzenetricarboxylic acid, trimethyl ester
4422-95-1, 1,3,5-Benzenetricarbonyl trichloride **330562-44-2**
444023-61-4, Fluorolink D 10
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(in prodn. of hyper-branched fluorinated multifunctional alcs.
and their derivs. for transparent coatings)
- IT **444023-80-7P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); **RACT (Reactant or reagent)**
(monomer; hyper-branched fluorinated multifunctional alcs. and
their derivs. for prodn. of transparent coatings)
- L38 ANSWER 4 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
2002:211417 Document No. 137:63498 2,4,4,5,7,7,8,8,9,9,9-Undecafluoro-
2,5-bis(trifluoromethyl)-3,6-dioxanonyl methacrylate. Paleta,
Oldrich; Palecek, Jiri; Michalek, Jiri (Department of Organic
Chemistry, Prague Institute of Chemical Technology, Prague, 16628,
Czech Rep.). Journal of Fluorine Chemistry, 114(1), 51-53 (English)
2002. CODEN: JFLCAR. ISSN: 0022-1139. Publisher: Elsevier Science
B.V..
- AB The title monomer (4) was prepd. from the trimer of
hexafluoropropene-1,2-oxide, 2,4,4,5,7,7,8,8,9,9,9-undecafluoro-2,5-
bis(trifluoromethyl)-3,6-dioxanonyl fluoride (1), via Me ester 2
that was reduced by sodium borohydride to the corresponding alkanol
3, which was finally acylated by methacryloyl chloride.
- IT **920-46-7, METHACRYLOYL CHLORIDE**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(prepn. of undecafluoro-bis(trifluoromethyl)dioxanonyl
methacrylate)
- RN 920-46-7 HCAPLUS
CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



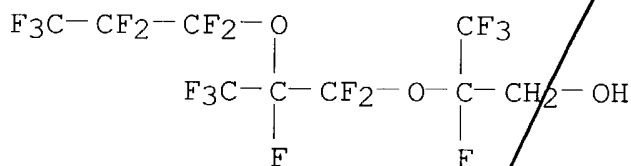
IT 14548-74-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)

(prepn. of undecafluoro-bis(trifluoromethyl)dioxanonyl
 methacrylate)

RN 14548-74-4 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]- (9CI) (CA INDEX NAME)



CC 35-2 (Chemistry of Synthetic High Polymers)

IT 920-46-7, METHACRYLOYL CHLORIDE 2641-34-1

RL: RCT (Reactant); **RACT (Reactant or reagent)**
 (prepn. of undecafluoro-bis(trifluoromethyl)dioxanonyl
 methacrylate)

IT 14548-74-4P 26131-32-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
 (prepn. of undecafluoro-bis(trifluoromethyl)dioxanonyl
 methacrylate)

L38 ANSWER 5 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1999:33458 Document No. 130:182786 Synthesis of a novel
 polyfluoroalkyl substituted 2-hydroxyethyl acrylate and its
 copolymers. Yang, Jin; Huang, Weiyuan (Lab. of Organofluorine
 Chemistry, Shanghai Inst. of Organic Chemistry, The Chinese Academy
 of Sciences, Shanghai, 200032, Peop. Rep. China). Chinese Journal
 of Polymer Science, 15(4), 362-367 (English) 1997. CODEN: CJPSEG.
 ISSN: 0256-7679. Publisher: Science Press.

AB Glycerol 1-(4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluorononyl) ether
 3-acrylate (I) was synthesized in six steps from glycerol
 1,2-acetonide. A preliminary investigation was undertaken on the
 synthesis and characterization of 1-2-hydroxyethyl methacrylate
 copolymers.

IT 170166-10-6P, Glycerol 1-(4,4,5,5,6,6,7,7,8,8,9,9,9-

tridecafluorononyl) ether

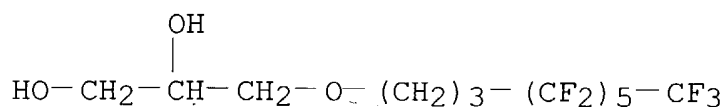
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(acryloylation; prepn. and polymn. of glycerol fluoroalkyl ether acrylate monomer)

RN 170166-10-6 HCAPLUS

CN 1,2-Propanediol, 3-[(4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluorononyl)oxy]- (9CI) (CA INDEX NAME)



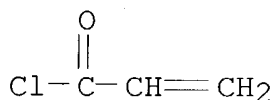
IT 814-68-6, Acryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(esterification; prepn. and polymn. of glycerol fluoroalkyl ether acrylate monomer)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IT 220554-35-8P, Glycerol 1-(4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluorononyl) ether 3-acrylate

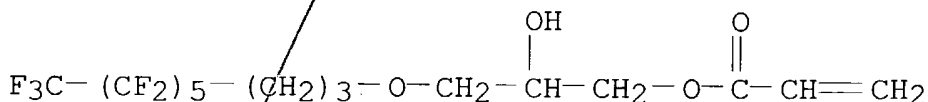
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(monomer; prepn. and polymn. of glycerol fluoroalkyl ether acrylate)

RN 220554-35-8 HCAPLUS

CN 2-Propenoic acid, 2-hydroxy-3-[(4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluorononyl)oxy]propyl ester (9CI) (CA INDEX NAME)



CC 35-2 (Chemistry of Synthetic High Polymers)

IT 170166-10-6P, Glycerol 1-(4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluorononyl) ether

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(acryloylation; prepn. and polymn. of glycerol fluoroalkyl ether acrylate monomer)

IT **814-68-6**, Acryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(esterification; prepn. and polymn. of glycerol fluoroalkyl ether acrylate monomer)

IT **220554-35-8P**, Glycerol 1-(4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluorononyl) ether 3-acrylate

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(monomer; prepn. and polymn. of glycerol fluoroalkyl ether acrylate)

L38 ANSWER 6 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1998:479994 Document No. 129:136879 Heat-resistant thermoplastic resin compositions containing fluoroacrylic fluoropolymers and their moldings. Tanaka, Yoshihito; Shimizu, Tetsuo (Daikin Industries, Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 10195302 A2 19980728 Heisei, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1997-4460 19970114.

AB Title compns. contain (a) thermoplastic heat-resistant resins having molding temp. .gtoreq.300.degree. and (b) polymers prepd. from monomers contg. ROCOCF:CH2 [R = XRf(CH2)n, Rf' (OCF2CF2CF2)a[OCF(CF3)CF2]b(OCF2)c(OCF2CF2)dOCZF(CF2)e; n = 0, 1; X = H, F, Me; Rf = C1-20 linear or branched perfluoroalkylene; Rf' = C(CF3)2 at n = 0; Z = F, CF3; Rf' = C1-3 perfluoroalkyl; a-e .gtoreq.0; a + b + c + d + e .gtoreq.1]. The compns. are molded to give title moldings showing sliding property, stain resistance, and no tack on the surface, which are useful as metal alternatives. Thus, 100 parts polythiophenylene (T-4) and 5 parts CH2:CMcCO2CH2CF2CF3 homopolymer were blended, pelletized, and injection-molded to give a disk showing water contact angle 91.degree. and hexadecane contact angle 31.degree..

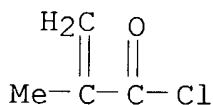
IT **920-46-7**

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(heat-resistant thermoplastic resins blended with fluoroacrylic fluoropolymers from)

RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

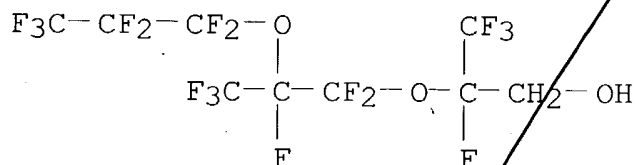


IT **14548-74-4P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)** (intermediates; heat-resistant thermoplastic resins blended with fluoroacrylic fluoropolymers from)

RN 14548-74-4 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]- (9CI) (CA INDEX NAME)



IC ICM C08L101-00

ICS C08L101-00; C08L033-16; C08L027-12

CC 37-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

IT 422-05-9, 2,2,3,3,3-Pentafluoropropanol 920-46-7

2641-34-1 60556-85-6

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(heat-resistant thermoplastic resins blended with fluoroacrylic fluoropolymers from)

IT 14548-74-4

RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation); **RACT (Reactant or reagent)**

(intermediates; heat-resistant thermoplastic resins blended with fluoroacrylic fluoropolymers from)

L38 ANSWER 7 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1997:687039 Document No. 127:358630 Fluoroalkyl derivatives of protected glycerol by nucleophilic substitution. Fluorine-containing amphiphilic mono- and bis-methacrylates. Kvicala, Jaroslav; Dolensky, Bohumil; Paleta, Oldrich (Department of Organic Chemistry, Prague Institute of Chemical Technology, Technicka 5, 16628, Prague, 6, Czech.). Journal of Fluorine Chemistry, 85(2), 117-125 (English) 1997. CODEN: JFLCAR. ISSN: 0022-1139. Publisher: Elsevier.

AB The tosylate of protected glycerol (solketal, 4-(hydroxymethyl)-2,2-dimethyl-1,3-dioxolane) was fluoroalkylated by a nucleophilic substitution reaction with sodium polyfluoroalkoxides. On deprotection, 3-O-fluoroalkylated glycerol was obtained which was converted to mono- and bis-methacrylates; analogous methacrylate derivs. were prep'd. from 3,3,4,5,5,5-hexafluoro-pentane-1,2-diol.

IT 920-46-7, Methacryloyl chloride

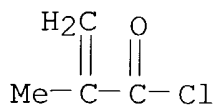
RL: RCT (Reactant); **RACT (Reactant or reagent)**

(prepn. of fluorine-contg. amphiphilic mono- and

bismethacrylates)

RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



IT 25385-68-6P 25385-69-7P 25385-73-3P

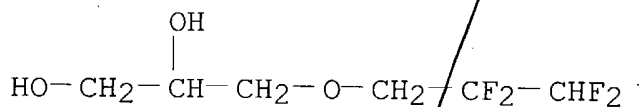
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);

RACT (Reactant or reagent)

(prepn. of fluorine-contg. amphiphilic mono- and bismethacrylates)

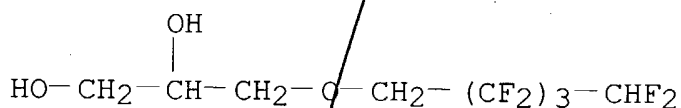
RN 25385-68-6 HCAPLUS

CN 1,2-Propanediol, 3-(2,2,3,3-tetrafluoropropoxy)- (8CI, 9CI) (CA INDEX NAME)



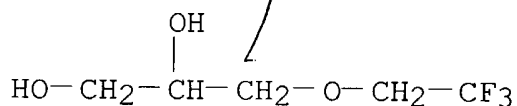
RN 25385-69-7 HCAPLUS

CN 1,2-Propanediol, 3-[(2,2,3,3,4,4,5,5-octafluoropentyl)oxy]- (8CI, 9CI) (CA INDEX NAME)



RN 25385-73-3 HCAPLUS

CN 1,2-Propanediol, 3-(2,2,2-trifluoroethoxy)- (8CI, 9CI) (CA INDEX NAME)



CC 23-17 (Aliphatic Compounds)

IT 778-28-9 920-46-7, Methacryloyl chloride 7305-59-1
121628-30-6

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(prepn. of fluorine-contg. amphiphilic mono- and
bismethacrylates)

IT 75-89-8P 76-37-9P 355-80-6P 420-87-1P **25385-68-6P**
25385-69-7P 25385-73-3P 39952-44-8P
41578-54-5P 198714-09-9P 198714-10-2P 198714-11-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)
(prepn. of fluorine-contg. amphiphilic mono- and
bismethacrylates)

L38 ANSWER 8 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1997:601508 Document No. 127:278492 Chemistry of
[(perfluoroalkyl)methyl] oxiranes. Regioselectivity of ring opening
with O-nucleophiles and the preparation of amphiphilic monomers.
Cirkva, Vladimir; Ameduri, Bruno; Boutevin, Bernard; Paleta, Oldrich
(Department of Organic Chemistry, Prague Institute of Chemical
Technology, 16628, Prague, 6, Czech.). Journal of Fluorine
Chemistry, 84(1), 53-61 (English) 1997. CODEN: JFLCAR. ISSN:
0022-1139. Publisher: Elsevier.

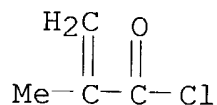
AB The reactions of oxiranes, RFCH₂CH(-O-)CH₂ (RFC4F₉, C₆F₁₃, C₈F₁₇)
with a series of alkanols in the presence of a Lewis acid took place
at the terminal carbon atom with complete regioselectivity.
2-Hydroxyethyl methacrylate and acrylate reacted similarly. The
reaction with alkanediols was controlled to proceed with one or two
mols. of the oxiranes chemoselectively. Non-regioselective,
base-catalyzed ring opening by methacrylic acid (83% terminal
attack) was discussed on the basis of the hard and soft acids and
bases (HSAB) concept. A convenient transformation of the oxiranes
to the corresponding diols via dioxolane intermediates, and their
conversion to dimethacrylates, was accomplished with overall yields
of 75%-79%. Thiourea converted the oxiranes into the corresponding
thiiranes. The reactions afforded products generally in yields of
82%-98%.

IT **920-46-7**, Methacryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(regioselectivity of ring opening of perfluoroalkylmethyloxiranes
with O-nucleophiles and prepn. of amphiphilic monomers)

RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



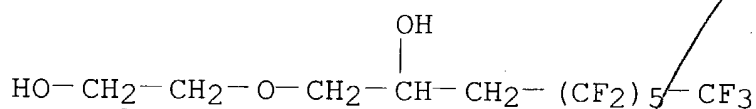
IT 196513-68-5P 196513-69-6P 196513-71-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)

(regioselectivity of ring opening of perfluoroalkylmethyloxiranes
 with O-nucleophiles and prepn. of amphiphilic monomers)

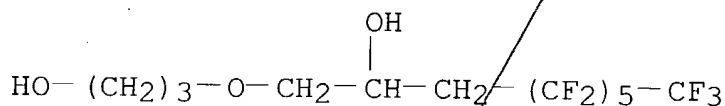
RN 196513-68-5 HCAPLUS

CN 2-Nonanol, 4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluoro-1-(2-
 hydroxyethoxy)- (9CI) (CA INDEX NAME)



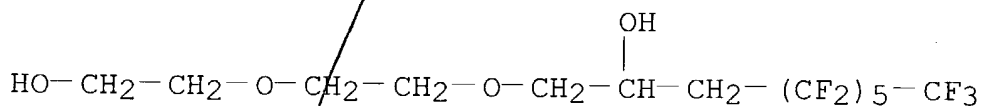
RN 196513-69-6 HCAPLUS

CN 2-Nonanol, 4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluoro-1-(3-
 hydroxypropoxy)- (9CI) (CA INDEX NAME)



RN 196513-71-0 HCAPLUS

CN 2-Nonanol, 4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluoro-1-[2-(2-
 hydroxyethoxy)ethoxy]- (9CI) (CA INDEX NAME)



CC 35-2 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 27, 37

IT 62-56-6, Thiourea, reactions 64-17-5, Ethanol, reactions
 67-56-1, Methanol, reactions 67-63-0, Isopropyl alcohol, reactions
 67-64-1, 2-Propanone, reactions 71-23-8, Propanol, reactions
 71-36-3, 1-Butanol, reactions 75-65-0, tert-Butanol, reactions
 78-92-2, sec-Butanol 79-41-4, reactions 107-21-1,
 1,2-Ethanediol, reactions 110-63-4, 1,4-Butanediol, reactions
 111-46-6, reactions 504-63-2, 1,3-Propanediol 818-61-1
 868-77-9 920-46-7, Methacryloyl chloride 38565-52-5
 38565-53-6 81190-28-5

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(regioselectivity of ring opening of perfluoroalkylmethyloxiranes
 with O-nucleophiles and prepn. of amphiphilic monomers)

IT 196513-68-5P 196513-69-6P 196513-70-9P
196513-71-0P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation);
RACT (Reactant or reagent)

(regioselectivity of ring opening of perfluoroalkylmethyloxiranes
with O-nucleophiles and prepn. of amphiphilic monomers)

L38 ANSWER 9 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1991:493150 Document No. 115:93150 Ether bond- and fluorine-containing
diacrylates and their manufacture. Yoshizumi, Motohiko; Yamashita,
Yukiya (Mitsubishi Metal Corp., Japan). Jpn. Kokai Tokkyo Koho JP
03056444 A2 19910312 Heisei, 3 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1989-190930 19890724.

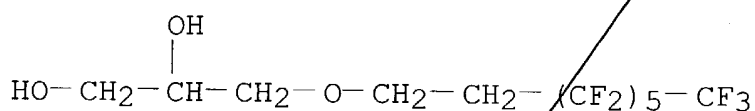
AB R(CH₂)_nOCH₂CH(O₂CR₁:CH₂)CH₂O₂CCR₁:CH₂ (I; R = C₁-10 perfluoroalkyl;
R₁ = H, Me; n = 1-3), useful for monomers and additives for
plastics, are manufd. by treating R(CH₂)_nOCH₂CH(OH)CH₂OH (II; R, n =
same as I) with CH₂:CR₁CO₂H (R₁ = same as I). I are also manufd. by
treating II with CH₂:CR₁COX (R₁ = same as I, X = Cl, Br, F) in the
presence of a base. Thus, 43.8 g II (R = C₆F₁₃, n = 2) was refluxed
with 43.2 g acrylic acid in C₆H₆ in the presence of p-MeC₆H₄SO₃H and
phenothiazine for 24 h, then neutralized with NaOH to give 16.0 g I
(R = C₆F₁₃, R₁ = H, n = 2) in 30% yield.

IT 126814-93-5 126814-95-7 135548-22-0

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification of, with (meth)acrylic acids or (meth)acryloyl
halides)

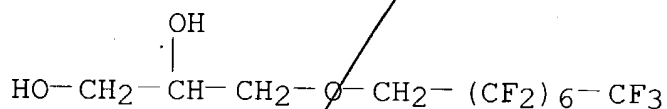
RN 126814-93-5 HCAPLUS

CN 1,2-Propanediol, 3-[(3,3,4,4,5,5,6,6,7,7,8,8,8-
tridecafluorooctyl)oxy]- (9CI) (CA INDEX NAME)



RN 126814-95-7 HCAPLUS

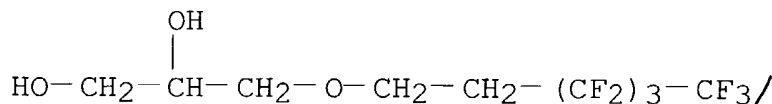
CN 1,2-Propanediol, 3-[(2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-
pentadecafluorooctyl)oxy]- (9CI) (CA INDEX NAME)



RN 135548-22-0 HCAPLUS

CN 1,2-Propanediol, 3-[(3,3,4,4,5,5,6,6,6-nonafluorohexyl)oxy]- (9CI)

(CA INDEX NAME)

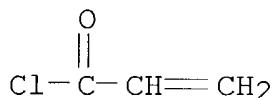


IT 814-68-6, Acryloyl chloride 920-46-7, Methacryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification of, with fluorine-contg. diols)

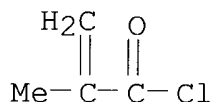
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



IC ICM C07C069-653

ICS C07C067-08; C07C067-14

CC 35-2 (Chemistry of Synthetic High Polymers)

IT 126814-93-5 126814-95-7 135548-22-0

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification of, with (meth)acrylic acids or (meth)acryloyl halides)

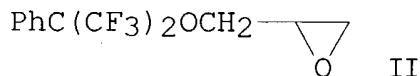
IT 79-10-7, 2-Propenoic acid, reactions 814-68-6, Acryloyl chloride 920-46-7, Methacryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification of, with fluorine-contg. diols)

L38 ANSWER 10 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1990:590938 Document No. 113:190938 Preparation of fluorine-containing aromatic compounds as monomers. Washimi, Akira; Yoshida, Tadao; Kimura, Kaoru (Toa Gosei Chemical Industry Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 02138152 A2 19900528 Heisei, 12 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1988-291867 19881118.

GI



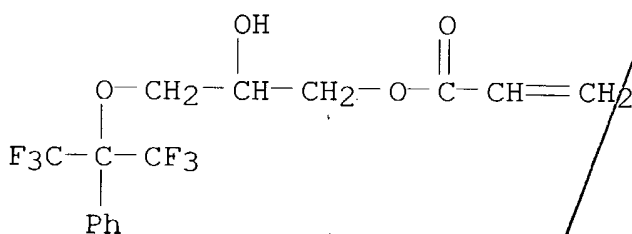
AB PhC(CF₃)₂OCH₂CH(OR₁)CH₂O₂CCR₂:CH₂ (I; R₁ = H, acryloyl, methacryloyl; R₂ = H, Me), useful as monomers for high-quality polymers, are prepd. A mixt. of epoxide II, acrylic acid, choline chloride, and a small amt. of hydroquinone in MePh was heated at 110.degree. slowly to give 90% I (R₁ = R₂ = H). Also prepd. were 5 addnl. I.

IT 129989-14-6 129989-15-7

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification of, with acrylic acid)

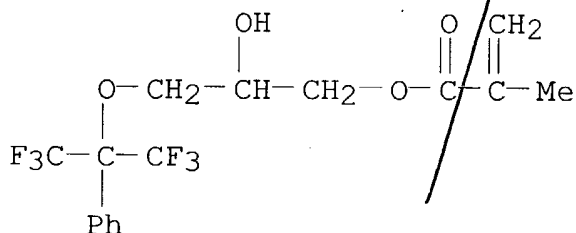
RN 129989-14-6 HCAPLUS

CN 2-Propenoic acid, 2-hydroxy-3-[2,2,2-trifluoro-1-phenyl-1-(trifluoromethyl)ethoxy]propyl ester (9CI) (CA INDEX NAME)



RN 129989-15-7 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxy-3-[2,2,2-trifluoro-1-phenyl-1-(trifluoromethyl)ethoxy]propyl ester (9CI) (CA INDEX NAME)



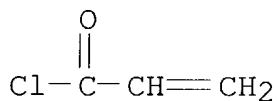
IT 814-68-6, 2-Propenoyl chloride 920-46-7,
Methacryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(esterification of, with oxirane derivs.)

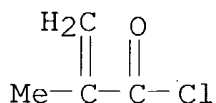
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



IC ICM C07C069-653

ICS A61K006-083; C08F020-30; G02C007-04

CC 25-18 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 35

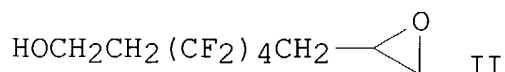
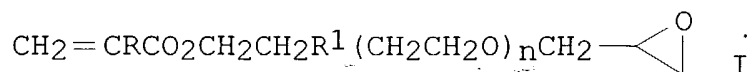
IT 25056-11-5 129989-14-6 129989-15-7

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification of, with acrylic acid)IT 79-10-7, 2-Propenoic acid, reactions 79-41-4, reactions
814-68-6, 2-Propenoyl chloride **920-46-7**,
Methacryloyl chlorideRL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification of, with oxirane derivs.)

L38 ANSWER 11 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1989:574816 Document No. 111:174816 Fluoro- and epoxy-containing
(meth)acrylate esters. Matsuo, Hitoshi; Oharu, Kazuya (Asahi Glass
Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 01050875 A2 19890227
Heisei, 4 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
1987-206508 19870821.

GI



AB Title compds. I (R = H, Me; R¹ = Cl-10 perfluoroalkylene; n = 0-1) are prepd. as monomers for water- and oilproofing agents and fluoropolymers. Thus, 164 g ICH₂CH₂(CF₂)₄I was treated with 106 g ClSO₃H at 50.degree. for 2 h and then hydrolyzed to give 111 g HOCH₂CH₂(CF₂)₄I, 100 g of which was treated with 18.7 g allyl alc. in the presence of AIBN at 80.degree. for 8 h and then stirred with aq. KOH and Me₂CO to give 66 g epoxide II. A soln. of 64 g II and 21 g Et₃N in AcOEt was treated with 22 g methacryloyl chloride at 0.degree. and aged at room temp. for 2 h to give 64 g I [R = Me, R¹ = (CF₂)₄, n = 0].

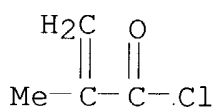
IT 920-46-7, Methacryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(reaction of, with epoxy group-contg. fluoroalcs.)

RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



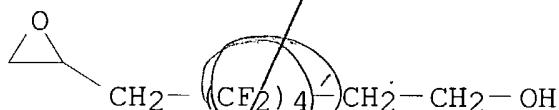
IT 123228-75-1 123228-77-3

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(reaction of, with methacryloyl chloride)

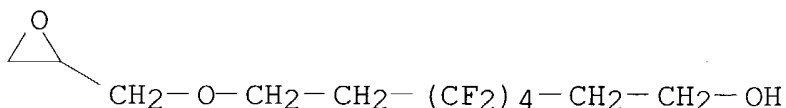
RN 123228-75-1 HCAPLUS

CN Oxiraneheptanol, .gamma.,.gamma.,.delta.,.delta.,.epsilon.,.epsilon.,.zeta.,.zeta.-octafluoro- (9CI) (CA INDEX NAME)

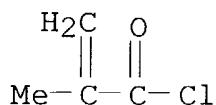


RN 123228-77-3 HCAPLUS

CN 1-Octanol, 3,3,4,4,5,5,6,6-octafluoro-8-(oxiranylmethoxy)- (9CI) (CA INDEX NAME)

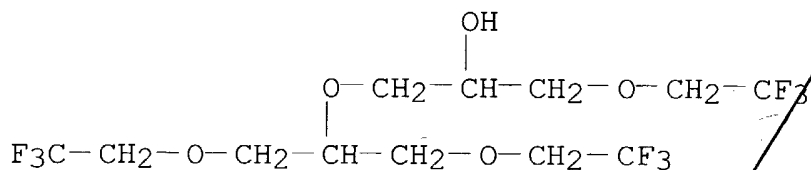


- IC ICM C07D303-24
ICA C08F020-22; C08F020-32
CC 35-2 (Chemistry of Synthetic High Polymers)
IT **920-46-7**, Methacryloyl chloride
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with epoxy group-contg. fluoroalcs.)
IT **123228-75-1 123228-77-3**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with methacryloyl chloride)
- L38 ANSWER 12 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN
1988:226887 Document No. 108:226887 Gas-permeable, soil-resistant,
transparent medical materials. Suzuki, Tamio (Toyo Contact Lens
Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 62014860 A2 19870123
Showa, 6 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
1985-153531 19850712.
- AB Polymers useful for contact lenses are prepd. contg. copolymers
CH₂:CRCOXnOCH₂CF₃ (R = H or Me, X = OCH(CH₂OCH₂CF₃)CH₂ or
OCH₂CH(CH₂OCH₂CF₃); n = 1 - 50. Trifluoroethyl glycidyl ether was
prepd., ring-polymd., distd. to give dimer alc., treated with
methacrylate acylchloride to give an ester, radical polymd., in
cloned into a film having sequences at 0.34 mm and 0 permeability at
35.degree. 4.1 X10⁻¹⁰ mL.cntdot.cm/cm²/s/mm Hg.
- IT **920-46-7**
RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification of, with glycidyl trifluoroethyl ether)
- RN 920-46-7 HCAPLUS
CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



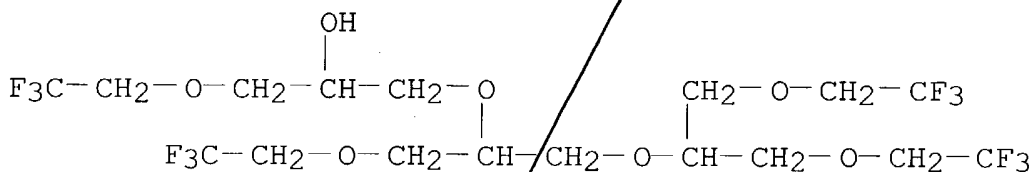
- IT **114333-78-7P 114333-79-8P**
RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); **RACT (Reactant or reagent)**
(manuf. and esterification of, with methacrylic chloride)
- RN 114333-78-7 HCAPLUS
CN 2-Propanol, 1-(2,2,2-trifluoroethoxy)-3-[2-(2,2,2-trifluoroethoxy)-1-

[(2,2,2-trifluoroethoxy)methyl]ethoxy]- (9CI) (CA INDEX NAME)



RN 114333-79-8 HCAPLUS

CN 3,6,9,13-Tetraoxapentadecan-11-ol, 1,1,1,15,15,15-hexafluoro-5,8-bis[(2,2,2-trifluoroethoxy)methyl]- (9CI) (CA INDEX NAME)



IC ICM A61L027-00

ICS A61L029-00

ICA C08F020-28; G02C007-04

CC 63-7 (Pharmaceuticals)

Section cross-reference(s): 35

IT 920-46-7

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(esterification of, with glycidyl trifluoroethyl ether)

IT 114239-07-5P 114333-78-7P 114333-79-8P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP

(Preparation); **RACT (Reactant or reagent)**

(manuf. and esterification of, with methacrylic chloride)

L38 ANSWER 13 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1987:68232 Document No. 106:68232 Fluorinated polyacrylates and polyacrylamides having a controlled crosslinking degree. Strepparola, Ezio; Re, Alberto (Ausimont S.p.A., Italy). Eur. Pat. Appl. EP 193370 A2 19860903, 6 pp. DESIGNATED STATES: R: BE, DE, FR, GB, IT, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1986-301302 19860224. PRIORITY: IT 1985-19629 19850222.

AB A mixt. of mono- and difunctional acrylic monomers contg. a perfluoropolyoxyalkylene chain is used to control the crosslinking degree in the polymn. of acrylic esters and/or acrylamides. The product is used in imparting water- and oil-repellent properties to fabrics, and as protective films or layers on magnetic tapes and discs. Thus, 49.8 g 1,1-dihydro-3,6,9-trioxa-4,7-

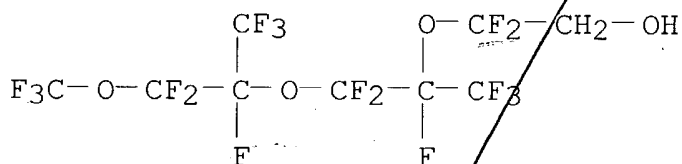
bis(perfluoromethyl)-undecafluoro-1-decanol (in 1,1,2-trichloro-1,2,2-trifluoroethane) was mixed dropwise with 10.9 g acryloyl chloride (I). Then, 12.1 g Et3N was added and after 3 h at 35.degree. CF3O[CF2CF(CF3)O]2CF2CH2O2CCH:CH2 (II) was obtained. HOCH2CF2O(C2F4O)m(CF2O)nCF2CH2OH (III) (mol. wt. 400) was treated with I to give a diacrylate. A soln. of II and the diacrylate in 1,1,2-trichloro-1,2,2-trifluoroethane was poured onto a glass plate, a 30 nm-thick film was obtained, which was bombarded (under N2) with high-energy electron beam (3 Mrad, 150 kV, velocity 30 m/min). The contact angle for hexadecane and heptane on the film corresponded to 13 dynes/cm surface tension.

IT 35345-55-2

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with acryloyl chloride)

RN 35345-55-2 HCAPLUS

CN Ethanol, 2-[1-[[1-[difluoro(trifluoromethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]difluoromethyl]-1,2,2,2-tetrafluoroethoxy]-2,2-difluoro- (9CI) (CA INDEX NAME)

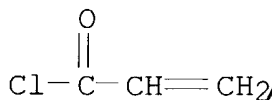


IT 814-68-6, Acryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with trioxobis(perfluoromethyl)undecafluorodecanol)

RN 814-68-6 HCAPIUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM C08F220-28

ICS C08F220-58; C09D003-80; G11B007-24; G11B005-84

ICI C08F220-28; C08F220-28, C08F220-58; C08F220-58; C08F220-58, C08F220-28

CC 37-3 (Plastics Manufacture and Processing)
Section cross-reference(s): 40, 42

IT 35345-55-2

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with acryloyl chloride)

IT **814-68-6**, Acryloyl chloride

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(reaction of, with trioxobis(perfluoromethyl)undecafluorodecanol)

L38 ANSWER 14 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1986:168967 Document No. 104:168967 Synthesis of acrylates of fluorinated alcohols. Lu, Hengyao; Guo, Caiyun; Wang, Shandi; Chen, Qingyun (Shanghai Inst. Org. Chem., Acad. Sin., Shanghai, Peop. Rep. China). Huaxue Xuebao, 43(10), 970-5 (Chinese) 1985. CODEN: HHHPA4. ISSN: 0567-7351. OTHER SOURCES: CASREACT 104:168967.

AB R(CH₂)mOH (R = fluorine-contg. group) was treated with CH₂:CR₁COCl (R₁ = H, Me) to give R(CH₂)mO₂CCR₁:CH₂ (I). Emulsion polymn. of I with octyl acrylate gave copolymer emulsions useful as water and oil repellent finishes for textiles.

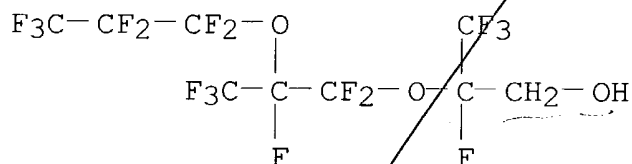
IT **14548-74-4**

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(reaction of, with (meth)acryloyl chloride)

RN 14548-74-4 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]- (9CI) (CA INDEX NAME)



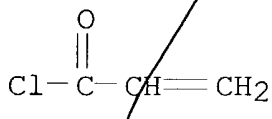
IT **814-68-6 920-46-7**

RL: RCT (Reactant); **RACT (Reactant or reagent)**

(reaction of, with fluorinated alc.)

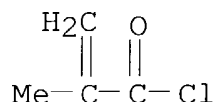
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



CC 35-7 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 40

IT **14548-74-4** 101829-19-0 101829-20-3 101829-21-4
101829-22-5 101829-23-6 101848-46-8

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with (meth)acryloyl chloride)

IT **814-68-6 920-46-7**

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with fluorinated alc.)

L38 ANSWER 15 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1984:211594 Document No. 100:211594 Water and oil repellents. (Nippon Mektron K. K., Japan). Jpn. Kokai Tokkyo Koho JP 58164672 A2
19830929 Showa, 8 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
1982-46566 19820324.

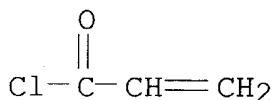
AB The title repellents contain a polymer having pendant poly(oxyperfluoropropylene) groups in the side chain. The repellents have excellent repellency and wash-resistance without damaging the color tone and hand of textiles. Thus, deionized water (50-60.degree.) 220, trimethyloctadecylammonium chloride 15, a mixt. of $\text{H}_2\text{C}:\text{CHCO}_2\text{CH}_2\text{CF}(\text{CF}_3)[\text{OCF}_2\text{CF}(\text{CF}_3)]_n\text{OCF}_2\text{CF}_2\text{CF}_3$ ($n = 0$ and 1) 100, 2-hydroxyethyl acrylate 0.5, N-methylolacrylamide 0.5 and acetone 100 parts were copolymd. by adding azodiisobutylamidine hydrochloride [15453-05-1] 0.05 part; the aq. latex soln. obtained was used to impregnate a cotton cloth for 5 min. The cloth showed excellent water- and oil-repellency.

IT **814-68-6**

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification by, of hydroxy-terminated poly(oxyperfluoropropylenes))

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



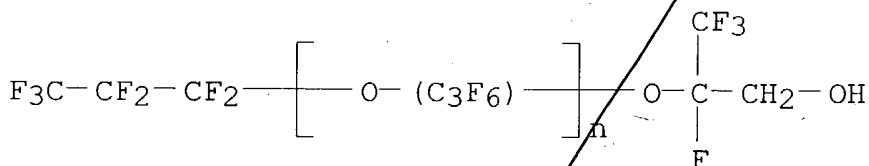
IT **90317-77-4P**

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); **RACT (Reactant or reagent)**

(prepn. and esterification of, with acryloyl chloride)

RN 90317-77-4 HCAPLUS

CN Poly[oxy(trifluoro(trifluoromethyl)-1,2-ethanediyl)],
.alpha.-(heptafluoropropyl)-.omega.-[1,2,2,2-tetrafluoro-1-(hydroxymethyl)ethoxy]- (9CI) (CA INDEX NAME)



IC C09K003-18

ICA C08F008-00; C08F020-00; D06M015-30

CC 40-9 (Textiles)

IT 814-68-6

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(esterification by, of hydroxy-terminated
poly(oxyperfluoropropylenes))

IT 90317-77-4P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP
(Preparation); **RACT (Reactant or reagent)**
(prepn. and esterification of, with acryloyl chloride)

L38 ANSWER 16 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1984:192504 Document No. 100:192504 Acrylic acid esters. (Nippon
Mectron Co., Ltd., Japan). Jpn. Kokai Tokkyo Koho JP 58194839 A2
19831112 Showa, 10 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP
1982-77657 19820510.

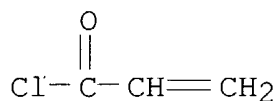
AB $\text{H}_2\text{C}:\text{CHCO}_2\text{QCF}(\text{CF}_3)[\text{OCF}_2\text{CF}(\text{CF}_3)]_n\text{OCF}_2\text{CF}_2\text{CF}_3$ [I; $n = 1, 2, 4$; $\text{Q} = \text{CH}_2$,
 $\text{CH}_2\text{CH}_2\text{O}_2\text{C}$, $\text{CH}_2\text{CH}(\text{OH})\text{CH}_2\text{O}_2\text{C}$, $\text{CH}_2\text{CH}(\text{CH}_2\text{OH})\text{O}_2\text{C}$, $\text{CH}_2\text{CH}_2\text{NMeCO}$] were
prepd. by esterification of $\text{F}_3\text{CCF}_2\text{CF}_2\text{O}[\text{CF}(\text{CF}_3)\text{CF}_2\text{O}]_n\text{CF}(\text{CF}_3)\text{QOH}$ (II)
with $\text{H}_2\text{O}:\text{CHCO}_2\text{X}$ (III; $\text{X} = \text{halogen}$). Thus, 27 g III ($\text{X} = \text{Cl}$)
[814-68-6] was added to a mixt. of 100 g II ($\text{Q} = \text{CH}_2$, $n = 1$)
[14548-74-4] and 0.1 g hydroquinone and the mixt. kept 5 h at
70.degree. with addn. of 20 mL pyridine to give 74.4 % I ($\text{Q} = \text{CH}_2$, n
 $= 1$) [17559-01-2], useful as a monomer in the manuf. of water- and
oil-repelling polymers.

IT 814-68-6 14548-74-4

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with fluoroalkanols)

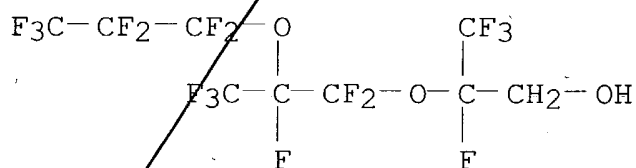
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 14548-74-4 HCAPLUS

CN 1-Propanol, 2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]- (9CI) (CA INDEX NAME)



IC C07C069-653; C07C067-14; C07C069-708

ICA C09K003-00; C09K003-18; D06M015-38

CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 23

IT **814-68-6 14548-74-4**

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with fluoroalkanols)

L38 ANSWER 17 OF 17 HCAPLUS COPYRIGHT 2004 ACS on STN

1983:618633 Document No. 99:218633 Oxygen-permeable contact lenses composed of a polymer of a telechelic perfluoro polyether. Rice, David E.; Ihlenfeld, Jay V. (Minnesota Mining and Manufacturing Co., USA). Eur. Pat. Appl. EP 84406 A1 19830727, 43 pp. DESIGNATED STATES: R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE. (English). CODEN: EPXXDW. APPLICATION: EP 1983-300023 19830105. PRIORITY: US 1982-340473 19820118.

AB Contact lenses which are mech. strong yet flexible, resistant to absorption of tear components, and highly permeable to O are prepd. from telechelic perfluoro polyether monomers contg. perfluorooxyalkylene units with mol. wt. 500-15,000 and a polymerizable group. $\text{H}_2\text{C}:\text{CMeCO}_2\text{CH}_2\text{CH}_2\text{NHC}_2\text{H}_4\text{CO}_2\text{CH}_2\text{CF}_2\text{O}(\text{CF}_2\text{CF}_2\text{O})_m(\text{CF}_2\text{O})_n\text{CF}_2\text{CH}_2\text{O}_2\text{CNHCH}_2\text{CH}_2\text{O}_2\text{CCMe}:\text{CH}_2$, prepd. from $\text{HOCH}_2\text{CF}_2\text{O}(\text{C}_2\text{F}_4\text{O})_m(\text{CF}_2\text{O})_n\text{CF}_2\text{CH}_2\text{OH}$ and 2-isocyanatoethyl methacrylate [30674-80-7] was polymd. with Me methacrylate and molded into a flexible, transport contact lens with n_D^{23} 1.355 and O permeability of 115 Barrers.

IT **814-68-6DP**, reaction products with methoxycarbonyl-terminated fluoropolyoxyalkylenes and diaminopropane and ethanolamine

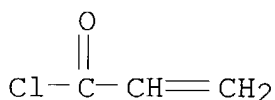
RL: THU (Therapeutic use); BIOL (Biological study); PREP

(Preparation); USES (Uses)

(prepn. of, for oxygen-permeable contact lenses)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



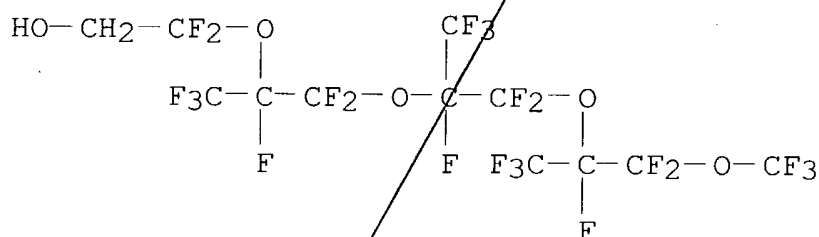
IT 35345-57-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with isocyanatoethylmethacrylate)

RN 35345-57-4 HCAPLUS

CN 2,5,8,11-Tetraoxatridecan-13-ol, 1,1,1,3,3,4,6,6,7,9,9,10,12,12-tetradecafluoro-4,7,10-tris(trifluoromethyl)- (9CI) (CA INDEX NAME)



IC B29D011-00; C08G065-00; C08G018-77; C08F220-38

CC 63-7 (Pharmaceuticals)

IT 75-35-4DP, polymers with methacrylate-terminated fluoropolyoxyalkylenes 79-41-4DP, polymers with methacrylate-terminated fluoropolyoxyalkylenes 80-62-6DP, polymers with methacrylate-terminated fluoropolyoxyalkylenes 88-12-0DP, polymers with methacrylate-terminated fluoropolyoxyalkylenes 107-11-9DP, reaction products with chloropolyoxyalkylenedicarboxylates, polymers with methacrylate 109-76-2DP, reaction products with methoxycarbonyl-terminated fluoropolyoxyalkylenes and ethanolamine and acrylates 141-43-5DP, reaction products with ethoxycarbonyl-terminated fluoropolyoxyalkylenes and diaminopropane and acrylates 814-68-6DP, reaction products with methoxycarbonyl-terminated fluoropolyoxyalkylenes and diaminopropane and ethanolamine 822-06-0DP, polymers with aminophenylcarboxymethyl fluoropolyoxyalkylenes 868-77-9DP, polymers with methacrylate-terminated fluoropolyoxyalkylenes 2754-40-7DP, polymers with aminomethyl-terminated fluoropolyoxyethylenes 3934-23-4DP, polymers with methacrylate-terminated fluoropolyoxyalkylenes 4200-79-7DP,

polymers with aminomethyl-terminated fluoropolyoxyethylenes
31075-35-1DP, polymers with aminophenylcarboxymethyl
fluoropolyoxyalkylenes 31075-36-2DP, polymers with
hydroxymethyl-terminated fluoropolyoxyalkylenes 56898-17-ODP,
polymers with methacrylate-terminated fluoropolyoxyalkylenes
87677-73-4P

RL: THU (Therapeutic use); BIOL (Biological study); PREP
(Preparation); USES (Uses)

(prepn. of, for oxygen-permeable contact lenses)

IT 35345-57-4

RL: RCT (Reactant); **RACT (Reactant or reagent)**
(reaction of, with isocyanatoethylmethacrylate)

=> d 139 1-15 cbib abs hitstr hitind

L39 ANSWER 1 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

2003:950582 Document No. 140:21270 Photoresist composition containing
acrylic polymers. Allen, Robert David; Breyta, Gregory; Brock,
Phillip; DiPietro, Richard A.; Fenzel-Alexander, Debra; Larson,
Carl; Medeiros, David R.; Pfeiffer, Dirk; Sooriyakumaran, Ratnam;
Truong, Hoa D.; Wallraff, Gregory M. (International Business
Machines Corporation, USA). U.S. Pat. Appl. Publ. US 2003224283 A1
20031204, 15 pp. (English). CODEN: USXXCO. APPLICATION: US
2002-159635 20020531.

AB A photoresist compn. is provided that includes a polymer having at
least one acrylate or methacrylate monomer that includes at least
one fluoro alc. group. A method of patterning a substrate using the
photoresist compn. is also provided herein.

IT 630415-12-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)
(acrylic polymer for photoresist)

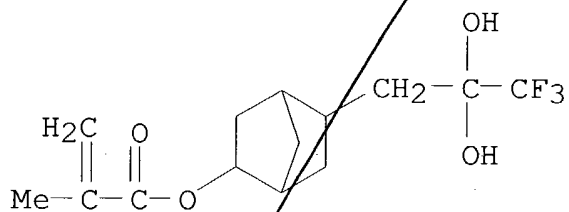
RN 630415-12-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester, polymer with
octahydro-2,5-methano-2H-indeno[1,2-b]oxiren-4-yl
2-methyl-2-propenoate, 5-(3,3,3-trifluoro-2,2-
dihydroxypropyl)bicyclo[2.2.1]hept-2-yl 2-methyl-2-propenoate and
4,4,4-trifluoro-3-hydroxy-1-methyl-3-(trifluoromethyl)butyl
2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 630414-91-4

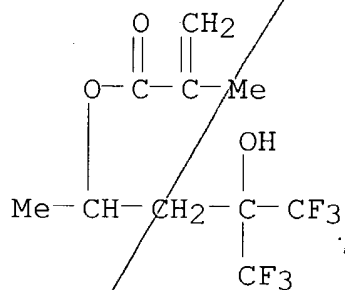
CMF C14 H19 F3 O4



CM 2

CRN 630414-85-6

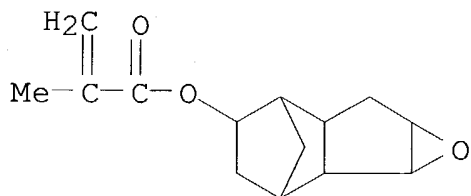
CMF C10 H12 F6 O3



CM 3

CRN 143963-39-7

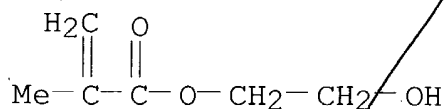
CMF C14 H18 O3



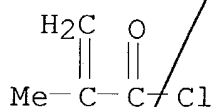
CM 4

CRN 868-77-9

CMF C6 H10 O3



IT 920-46-7, Methacryloyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of acrylic polymer for photoresist)
 RN 920-46-7 HCAPLUS
 CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



IC ICM G03F007-004
 NCL 430270100; 430910000; 430281100; 430907000; 430325000; 430323000;
 430927000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and
 Other Reprographic Processes)

IT 630415-01-9P 630415-02-0P 630415-03-1P 630415-04-2P
 630415-06-4P 630415-08-6P 630415-10-0P 630415-11-1P
630415-12-2P 630415-14-4P 630415-15-5P 630415-16-6P
 630415-17-7P 630415-18-8P 630415-20-2P 630415-22-4P
 630415-24-6P 630415-26-8P 630415-27-9P

RL: IMF (Industrial manufacture); TEM (Technical or engineered
 material use); PREP (Preparation); USES (Uses)
 (acrylic polymer for photoresist)

IT 79-41-4, Methacrylic acid, reactions 646-97-9 920-46-7,
 Methacryloyl chloride 5380-87-0 16712-64-4 196314-61-1
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (prepn. of acrylic polymer for photoresist)

L39 ANSWER 2 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
 2000:238068 Document No. 132:266766 Straight-chain and branched
 perfluoroalkyl halides and derivatives, their preparation,
 fluoropolymers, and use as oil- and water-repellant treatment agents
 for surfaces. Behr, Frederick E.; Dams, Rudolf J.; Dewitte, Johan
 E.; Hagen, Donald F. (3M Innovative Properties Company, USA). U.S.
 US 6048952 A 20000411, 22 pp., Cont.-in-part of U.S. Ser. No.
 723,049, abandoned. (English). CODEN: USXXAM. APPLICATION: US
 1997-794798 19970204. PRIORITY: US 1991-728184 19910710; US
 1994-314939 19940929; US 1995-476954 19950607; US 1996-723049
 19960930.

AB Aq. treating agents for a substrate comprise compds. with pendant
 satd. perfluoroalkyl groups, where some of the perfluoroalkyl groups

are straight chain and some are branched chain; and applying the polymer to the substrate; where 60-90% of the perfluoroalkyl groups are straight chain and .apprx.10-40% of the perfluoroalkyl groups are branched chain.

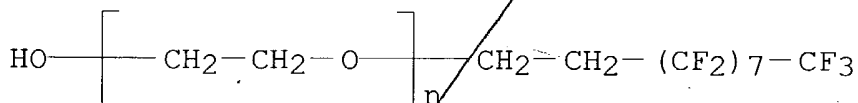
IT 58228-15-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(straight-chain and branched perfluoroalkyl halides and derivs. for use as oil- and water-repellent treatment agents for fabrics and other surfaces)

RN 58228-15-2 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)-.omega.-hydroxy- (9CI) (CA INDEX NAME)



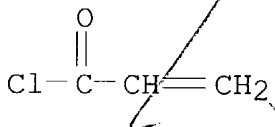
IT 814-68-6, Acryloyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(straight-chain and branched perfluoroalkyl halides and derivs. for use as oil- and water-repellent treatment agents for fabrics and other surfaces)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM C08F018-20

NCL 526245000

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 40, 46

IT 107-19-7DP, Propargyl alcohol, reaction products with perfluoroalkylethanethiols, phosphate esters, ammonium salts
107-19-7DP, Propargyl alcohol, reaction products with perfluoroalkylthiols and PAPI 9003-11-6DP, mono[.omega.-[(heptafluorodecyl)thio]alkyl] ethers 9016-87-9DP, PAPI, reaction products with perfluoroalkyl alcs. 27905-45-9DP, reaction products with PAPI 34143-74-3DP, reaction products with methoxymethylmelamines, propargyl alc. and PAPI 34451-25-7DP, reaction products with propargyl alc., phosphate esters, ammonium salts 54949-95-0P 58228-15-2P 62097-34-1DP, Ethylene

glycol-PAPI copolymer, reaction products with perfluoroalkylethanol
62880-96-0P 62880-97-1P 63225-57-0P 99332-32-8P 118570-75-5P
149759-83-1P 150940-87-7P 150944-46-0P 150944-47-1P
150953-92-7P 150956-37-9P 189398-01-4DP, phosphate esters,
ammonium salts 218462-55-6P 218462-56-7P 218462-57-8P
218462-58-9DP, reaction products with propane sultone 218462-59-0P
218462-60-3P 218462-61-4P 218462-62-5P 218462-64-7P
218462-65-8DP, reaction products with propane sultone 218462-66-9P
218462-67-0P 218462-68-1P 218462-69-2P 218605-22-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(straight-chain and branched perfluoroalkyl halides and derivs.
for use as oil- and water-repellent treatment agents for fabrics
and other surfaces)

IT 62-56-6, Thiourea, reactions 74-85-1, Ethene, reactions
107-15-3, Ethylene diamine, reactions 107-18-6, 2-Propen-1-ol,
reactions 109-55-7 307-51-7, Perfluorodecanesulfonyl fluoride
814-68-6, Acryloyl chloride 3089-11-0D, Hexamethoxymethyl
melamine, reaction products with perfluoroalkylethylthiols
6915-15-7, Malic acid 7553-56-2, Iodine, reactions 10043-35-3,
Boric acid, reactions 15214-89-8 32779-61-6 40630-30-6
55591-23-6, Perfluorohexanesulfonyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(straight-chain and branched perfluoroalkyl halides and derivs.
for use as oil- and water-repellent treatment agents for fabrics
and other surfaces)

L39 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

2000:57627 Document No. 132:64627 Synthesis and application of
fluoroalkyl and hydroxy-substituted acrylate. Huang, Weiyuan; Yang,
Jin (Shanghai Inst. of Organic Chemistry, Chinese Academy of
Sciences, Peop. Rep. China). Faming Zhuanli Shenqing Gongkai
Shuomingshu CN 1165810 A 19971126, 11 pp. (Chinese). CODEN:
CNXXEV. APPLICATION: CN 1997-106459 19970611.

AB The substituted acrylate represented by a formula of
 $\text{CH}_2\text{:C(R)COO(CH}_2\text{)}_m\text{A(CH}_2\text{)}_n\text{O(CH}_2\text{)}_3\text{Rf}$ (R: H, Me; m = 1, 8; n = 1, 6; A:
hydroxymethylene, 2,2-dimethyl-1,3-dioxolane-4,5-diyl; Rf: F(CF₂)_s,
Cl(CF₂)_s; and s = 2-10) is synthesized from glycerin or aleuritic
acid by: (1) protection with acetone, (2) substitution with
2-propenyl bromide, (3) addn. with perfluoroalkyl iodide, (4)
catalytic redn., and (5) addn. with acryloyl chloride. The
substituted acrylate is used as monomer in coating, and optical
material (adelomorphic glasses).

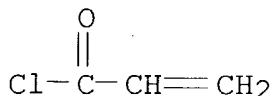
IT **814-68-6**, Acryloyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting material; synthesis and application of fluoroalkyl (or
hydroxy)-substituted acrylate)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)

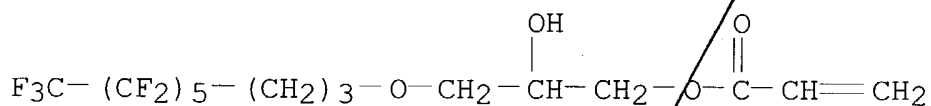


IT 220554-35-8P 253453-38-2P 253453-39-3P
253453-40-6P 253453-41-7P 253453-42-8P
253453-49-5P

RL: IMF (Industrial manufacture); PREP (Preparation)
(synthesis and application of fluoroalkyl (or
hydroxy)-substituted acrylate)

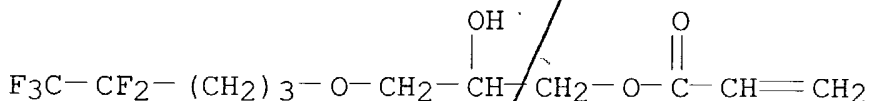
RN 220554-35-8 HCAPLUS

CN 2-Propenoic acid, 2-hydroxy-3-[(4,4,5,5,6,6,7,7,8,8,9,9,9-tridecafluorononyl)oxy]propyl ester (9CI) (CA INDEX NAME)



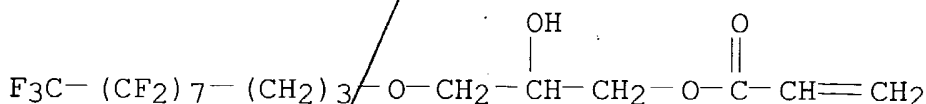
RN 253453-38-2 HCAPLUS

CN 2-Propenoic acid, 2-hydroxy-3-[(4,4,5,5,5-pentafluoropentyl)oxy]propyl ester (9CI) (CA INDEX NAME)



RN 253453-39-3 HCAPLUS

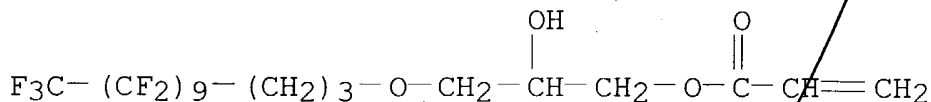
CN 2-Propenoic acid, 3-[(4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,11-heptadecafluoroundecyl)oxy]-2-hydroxypropyl ester (9CI) (CA INDEX NAME)



RN 253453-40-6 HCAPLUS

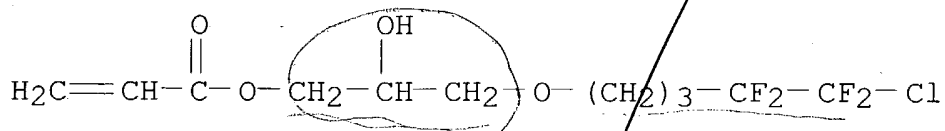
CN 2-Propenoic acid, 3-[(4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,13-heneicosafuorotridecyl)oxy]-2-hydroxypropyl ester (9CI) (CA

INDEX NAME)



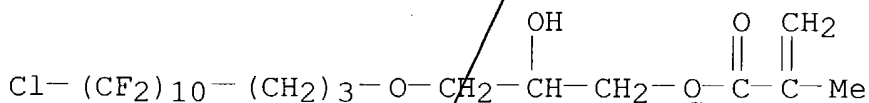
RN 253453-41-7 HCAPLUS

CN 2-Propenoic acid, 3-[(5-chloro-4,4,5,5-tetrafluoropentyl)oxy]-2-hydroxypropyl ester (9CI) (CA INDEX NAME)



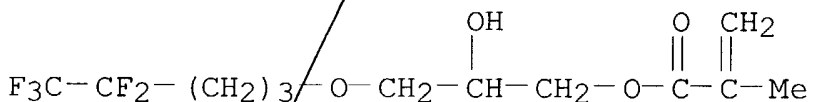
RN 253453-42-8 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 3-[(13-chloro-4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13-eicosafluorotridecyl)oxy]-2-hydroxypropyl ester (9CI) (CA INDEX NAME)



RN 253453-49-5 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxy-3-[(4,4,5,5,5-pentafluoropentyl)oxy]propyl ester (9CI) (CA INDEX NAME)



IC ICM C07C069-653

ICS C07C067-00; C07C067-14

CC 35-2 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37, 42

IT 56-81-5, 1,2,3-Propanetriol, reactions 106-95-6, 2-Propenyl bromide, reactions 354-64-3, Perfluoroethyl iodide 355-43-1, Perfluorohexyl iodide 421-78-3 423-62-1, Perfluorodecyl iodide 507-63-1, Perfluorooctyl iodide 814-68-6, Acryloyl

chloride 6949-98-0 16486-99-0

RL: RCT (Reactant); RACT (Reactant or reagent)

(starting material; synthesis and application of fluoroalkyl (or hydroxy)-substituted acrylate)

IT 220554-35-8P 253453-38-2P 253453-39-3P

253453-40-6P 253453-41-7P 253453-42-8P

253453-43-9P 253453-44-0P 253453-45-1P 253453-46-2P

253453-47-3P 253453-48-4P 253453-49-5P 253453-50-8P

RL: IMF (Industrial manufacture); PREP (Preparation)

(synthesis and application of fluoroalkyl (or hydroxy)-substituted acrylate)

L39 ANSWER 4 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

1999:12326 Document No. 130:83186 Perfluoroalkyl halides and derivatives for surface treatment. Behr, Frederick E.; Dams, Rudolf J.; Dewitte, Johan E.; Hagen, Donald F. (Minnesota Mining & Manufacturing Company, USA). U.S. US 5852148 A 19981222, 22 pp., Cont.-in-part of U.S. Ser. No. 489,094, abandoned. (English). CODEN: USXXAM. APPLICATION: US 1997-794828 19970204. PRIORITY: US 1991-728184 19910710; US 1994-314939 19940929; US 1995-489094 19950609.

AB A method for treating a substrate, comprises: providing a substrate; providing a polymer comprising a plurality of pendant satd. perfluoroalkyl groups, wherein some of the perfluoroalkyl groups are straight chain and some are branched chain; and applying the polymer to the substrate; wherein 65-85% of the perfluoroalkyl groups are straight chain and about 15 to about 35% of the perfluoroalkyl groups are branched chain. These mixts. contain some compds. with a straight perfluoroalkyl group and some with a branched perfluoroalkyl group. Methods of prepn. and use are also described.

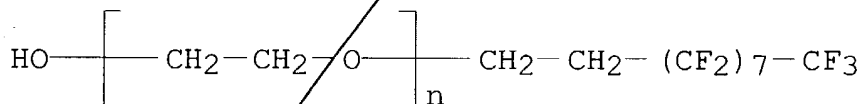
IT 58228-15-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(perfluoroalkyl halides and derivs. for surface treatment)

RN 58228-15-2 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)-.omega.-hydroxy- (9CI) (CA INDEX NAME)



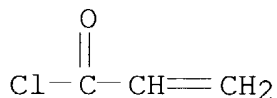
IT 814-68-6, Acryloyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(perfluoroalkyl halides and derivs. for surface treatment)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM C08F018-20

NCL 526245000

CC 45-4 (Industrial Organic Chemicals, Leather, Fats, and Waxes)
Section cross-reference(s): 38, 40, 46

IT 107-19-7DP, Propargyl alcohol, reaction products with
perfluoroalkylethanethiols, phosphate esters, ammonium salts
107-19-7DP, Propargyl alcohol, reaction products with
perfluoroalkylthiols and PAPI 9003-11-6DP, mono[.omega.-
[(heptadecafluorodecyl)thio]alkyl] ethers 9016-87-9DP, PAPI,
reaction products with perfluoroalkyl alcs. 27905-45-9DP, reaction
products with PAPI 34143-74-3DP, reaction products with
methoxymethylmelamines, propargyl alc. and PAPI 34451-25-7DP,
reaction products with propargyl alc., phosphate esters, ammonium
salts 54949-95-0P **58228-15-2P** 62097-34-1DP, Ethylene
glycol-PAPI copolymer, reaction products with perfluoroalkylethanols
62880-96-0P 62880-97-1P 63225-57-0P 99332-32-8P 118570-75-5P
149759-83-1P 150940-87-7P 150944-46-0P 150944-47-1P
150953-92-7P 150956-37-9P 189398-01-4DP, phosphate esters,
ammonium salts 218462-55-6P 218462-56-7P 218462-57-8P
218462-58-9DP, reaction products with propane sultone 218462-59-0P
218462-60-3P 218462-61-4P 218462-62-5P 218462-64-7P
218462-65-8DP, reaction products with propane sultone 218462-66-9P
218462-67-0P 218462-68-1P 218462-69-2P 218605-22-2P
RL: IMF (Industrial manufacture); TEM (Technical or engineered
material use); PREP (Preparation); USES (Uses)

(perfluoroalkyl halides and derivs. for surface treatment)
IT 62-56-6, Thiourea, reactions 74-85-1, Ethene, reactions
107-15-3, Ethylene diamine, reactions 107-18-6, 2-Propen-1-ol,
reactions 109-55-7 307-51-7, Perfluorodecanesulfonyl fluoride
814-68-6, Acryloyl chloride 3089-11-0D, Hexamethoxymethyl
melamine, reaction products with perfluoroalkylethylthiols
6915-15-7, Malic acid 7553-56-2, Iodine, reactions 10043-35-3,
Boric acid, reactions 15214-89-8 32779-61-6 40630-30-6
55591-23-6, Perfluorohexanesulfonyl chloride
RL: RCT (Reactant); RACT (Reactant or reagent)
(perfluoroalkyl halides and derivs. for surface treatment)

L39 ANSWER 5 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
1994:136059 Document No. 120:136059 Perfluoroalkyl halides and
derivatives as precursors for oil and water repellants and

surfactants. Behr, Frederick E.; Dams, Rudolf J.; DeWitte, Johan E.; Hagen, Donald F. (Minnesota Mining and Manufacturing Co., USA). Can. Pat. Appl. CA 2071596 AA 19930111, 67 pp. (English). CODEN: CPXXEB. APPLICATION: CA 1992-2071596 19920618. PRIORITY: US 1991-728184 19910710.

AB The title compds. comprise a mixt. of straight and branched perfluoroalkyl groups bonded to Cl, Br, or I through a F-free alkylene group. Perfluorodecyltetrahydroiodide (prepd. from perfluorosulfonyl fluoride, 40% straight and 60% branched, treated first with I, then with C₂H₄) was derivatized to thiol functionality by treatment with thiourea in EtOH to give perfluorodecyltetrahydrothiol (I). I was added to a reaction mixt. contg. hexamethoxymethylmelamine to give a I-melamine condensate (II, 1:4 mol ratio). A 50/50 polyester/cotton fabric blend was treated with an emulsion of II at 0.3%, dried and cured at 150.degree., to give a fabric with oil resistance (AATCC 118-1975) 5 and 5 after 1 dry cleaning, vs. 3 and 2, resp., for a precursor perfluorodecyltetrahydroiodide having all straight chain perfluoroalkyl groups.

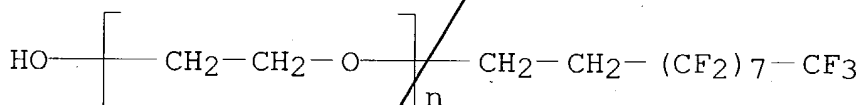
IT **58228-15-2P**

RL: PREP (Preparation)

(linear and branched, prepn. of, as nonionic surfactant)

RN 58228-15-2 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl)-.omega.-hydroxy- (9CI) (CA INDEX NAME)



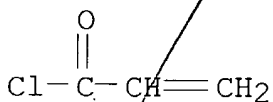
IT **814-68-6**, Acryloyl chloride

RL: USES (Uses)

(linear and branched, reaction of, with perfluoroalkyltetrahydro alc.)

RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM C08L027-12

ICS C09D004-00; C09D127-12; C09D175-04; C08L075-04

CC 37-2 (Plastics Manufacture and Processing)

Section cross-reference(s): 23, 40, 46

IT 9003-11-6DP, thioethers with tetrahydroperfluorodecanethiol
34143-74-3DP, reaction products with ethylene oxide-propylene oxide
copolymer **58228-15-2P** 150997-16-3P

RL: PREP (Preparation)

(linear and branched, prepn. of, as nonionic surfactant)

IT **814-68-6**, Acryloyl chloride

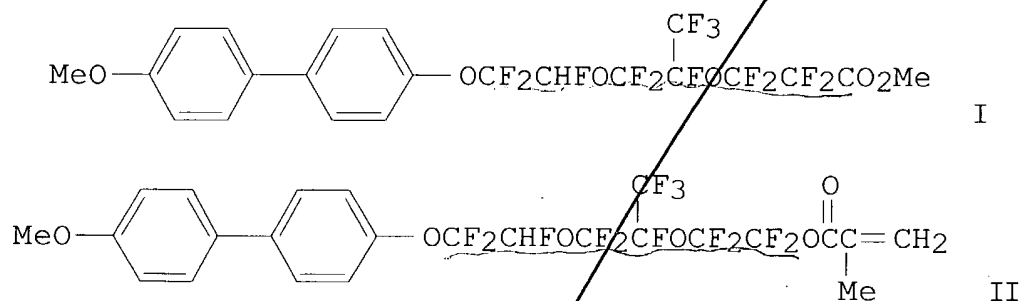
RL: USES (Uses)

(linear and branched, reaction of, with perfluoroalkyltetrahydro
alc.)

L39 ANSWER 6 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

1993:538900 Document No. 119:138900 Aryloxyfluoroether esters,
processes for preparation thereof, and alcohols and acids formed
therefrom. Feiring, Andrew E. (du Pont de Nemours, E. I., and Co.,
USA). U.S. US 5198570 A 19930330, 8 pp. (English). CODEN:
USXXAM. APPLICATION: US 1990-474586 19900131.

GI



AB The title process comprises the treatment of a polyfluorovinyl ether ester with an hydroxyarom. compd. These polyfluorovinyl ether esters are intermediates for polymerizable monomers. Condensation of 4'-methoxy-4-hydroxybiphenyl with Me 3-[2-(trifluoroethenyl)oxy]-1-(trifluoromethyl)-1,2,2-trifluoroethoxy]-2,2,3,3-tetrafluoropropanoate gave the adduct I in 52% yield. Redn. of I gave the resp. alc. which was condensed with methacryloyl chloride to give the polyfluorovinyl ether ester II. Polymn. of II gave a polymer with no. av. mol. wt. 34,400.

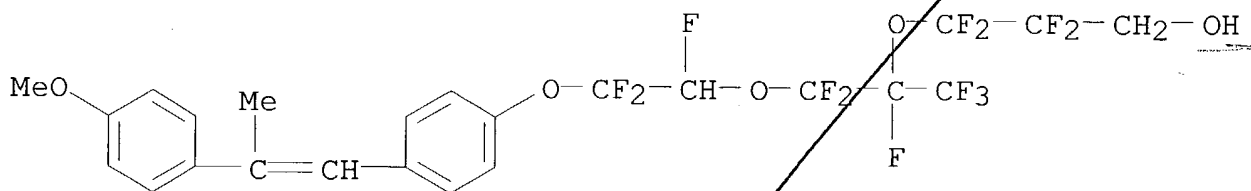
IT **130994-69-3P 136482-69-4P 148871-87-8P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 130994-69-3 HCAPLUS

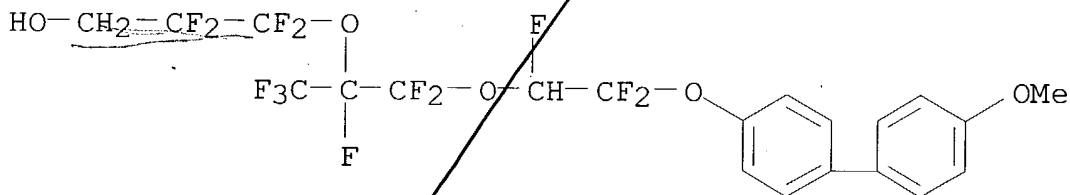
CN 1-Propanol, 3-[1-[difluoro[1,2,2-trifluoro-2-[4-[2-(4-methoxyphenyl)]-

1-propenyl]phenoxy]ethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro- (9CI) (CA INDEX NAME)



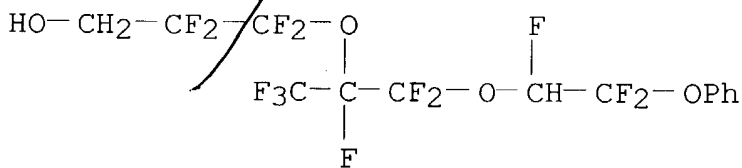
RN 136482-69-4 HCAPLUS

CN 1-Propanol, 3-[1-[difluoro[1,2,2-trifluoro-2-[(4'-methoxy[1,1'-biphenyl]-4-yl)oxy]ethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro- (9CI) (CA INDEX NAME)



RN 148871-87-8 HCAPLUS

CN 1-Propanol, 3-[2-[difluoro(1,2,2-trifluoro-2-phenoxyethoxy)methyl]-1,2,2,2-tetrafluoroethoxy]-2,2,3,3-tetrafluoro- (9CI) (CA INDEX NAME)



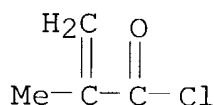
IT 920-46-7, Methacryloyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(reactant for [(biphenylyloxy)fluoroethoxy]fluoroethoxy]fluoroethyl methacrylate)

RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



IC ICM C07C069-76

NCL 560061000

CC 25-18 (Benzene, Its Derivatives, and Condensed Benzenoid Compounds)
Section cross-reference(s): 35

IT **130994-69-3P** 134023-19-1P 136356-02-0P 136356-03-1P
136482-69-4P 136513-57-0P 136513-58-1P 144373-67-1P
148871-87-8P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prep. of)

IT **920-46-7**, Methacryloyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant for [[(biphenylyloxy)fluoroethoxy]fluoroethoxy]fluoroethyl methacrylate)

L39 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

1990:22345 Document No. 112:22345 Manufacture of chromophore-containing fluoropolymers which are soluble in fluorocarbons. Garbe, James E. (Minnesota Mining and Manufacturing Co., USA). Eur. Pat. Appl. EP 323060 A2 19890705, 19 pp. DESIGNATED STATES: R: CH, DE, FR, GB, IT, LI. (English). CODEN: EPXXDW. APPLICATION: EP 1988-311678 19881209. PRIORITY: US 1987-140023 19871231.

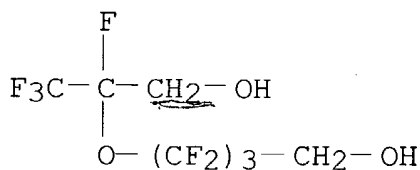
AB The title dye-contg. fluoropolymers, which are sol. in and can effectively color fluorocarbons, thus providing a way to detect liq. fluorocarbon leaks (no data), are prep. by polymg. optionally fluorinated dye monomers by addn. or condensation polymn. with fluorinated comonomers. 1-Hydroxy-4-(4-tolylamino)anthraquinone was esterified with acryloyl chloride, producing 1-acryloxy-4-(4-tolylamino)anthraquinone, 0.862 g of which was polymd. with 10 g of 1,1-dihydroperfluorooctyl methacrylate at 65.degree. in the presence of AIBN and 2,3,3-trichloroheptafluorobutane, producing a copolymer which was sol. in and imparted a red color to Freon 113, FC-75, and Fluorinert liq. The copolymer was insol. in PhMe or Me₂CO.

IT **109882-33-9**

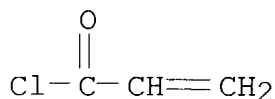
RL: USES (Uses)
(condensation of, with phosgene)

RN 109882-33-9 HCAPLUS

CN 1-Butanol, 2,2,3,3,4,4-hexafluoro-4-[1,2,2,2-tetrafluoro-1-(hydroxymethyl)ethoxy]- (9CI) (CA INDEX NAME)



IT **814-68-6**, Acryloyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (esterification by, of hydroxyl group-contg. dyes)
 RN 814-68-6 HCAPLUS
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM C08F245-00
 ICS C09D003-74; C08F299-00; C08F008-00
 CC 41-4 (Dyes, Organic Pigments, Fluorescent Brighteners, and
 Photographic Sensitizers)
 Section cross-reference(s): 35
 IT **109882-33-9**
 RL: USES (Uses)
 (condensation of, with phosgene)
 IT **814-68-6**, Acryloyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (esterification by, of hydroxyl group-contg. dyes)

L39 ANSWER 8 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
 1989:535008 Document No. 111:135008 Fluorine-containing mono- or
 polyalkylene glycols and their manufacture. Tanaka, Masahide; Agou,
 Tokinori; Kuwahara, Masahiro; Sakashita, Takeshi; Shimoda, Tomoaki;
 Sudou, Masaru (Mitsui Petrochemical Industries, Ltd., Japan). Eur.
 Pat. Appl. EP 297822 A1 19890104, 19 pp. DESIGNATED STATES: R: AT,
 BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE. (English). CODEN:
 EPXXDW. APPLICATION: EP 1988-305859 19880628. PRIORITY: JP
 1987-161495 19870629; JP 1987-177419 19870715.
 AB Title glycols, useful in prodn. of polymers for contact lens with
 good O permeability and water swellability, are prepd. comprising
 (alkyl-substituted)oxyalkylene main chain and glycol terminal groups
 which are mono- or disubstituted with C1-30 unsatd. hydrocarbyl
 groups, and (C1-100 hydrocarbyl-substituted) polar groups, provided
 that both terminal substitution groups are not C1-30 hydrocarbyl
 groups contg. O or F at the same time. The substitution groups on

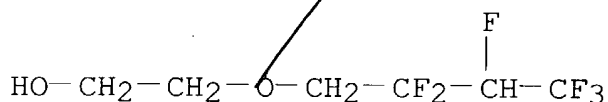
main chain contain F. 1,2-Dihydroxyl-3,3,4,5,5,5-hexafluoropentane (I) was prepd. from ethylene glycol and hexafluoropropylene. I was esterified with $\text{CH}_2\text{:CMeCOCl}$ to prep. an unsatd. diester useful for polymer prepn. (e.g., polyacrylate).

IT 63693-10-7P 121628-31-7P 121628-32-8P
121628-35-1P 121628-36-2P 121628-39-5P
121628-65-7P 121664-33-3P

RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and esterification of, with methacrylic acid chloride)

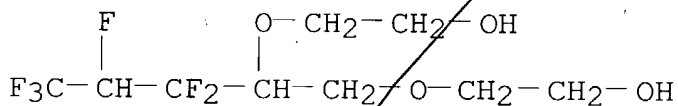
RN 63693-10-7 HCAPLUS

CN Ethanol, 2-(2,2,3,4,4,4-hexafluorobutoxy)- (9CI) (CA INDEX NAME)



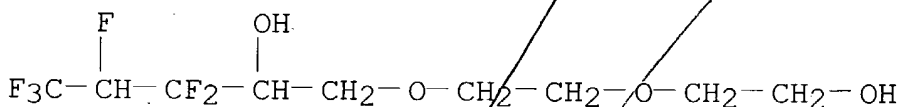
RN 121628-31-7 HCAPLUS

CN Ethanol, 2,2'-[[(1,1,2,3,3,3-hexafluoropropyl)-1,2-ethanediyl]bis(oxy)]bis- (9CI) (CA INDEX NAME)



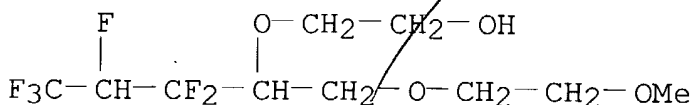
RN 121628-32-8 HCAPLUS

CN 2-Pentanol, 3,3,4,5,5,5-hexafluoro-1-[2-(2-hydroxyethoxy)ethoxy]- (9CI) (CA INDEX NAME)



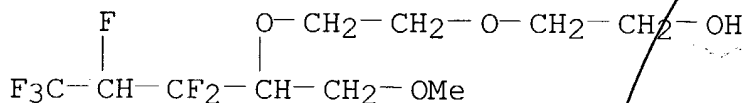
RN 121628-35-1 HCAPLUS

CN Ethanol, 2-[2,2,3,4,4,4-hexafluoro-1-[(2-methoxyethoxy)methyl]butoxy]- (9CI) (CA INDEX NAME)



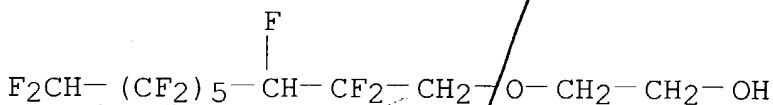
RN 121628-36-2 HCAPLUS

CN Ethanol, 2-[2-[2,2,3,4,4,4-hexafluoro-1-(methoxymethyl)butoxy]ethoxy]- (9CI) (CA INDEX NAME)



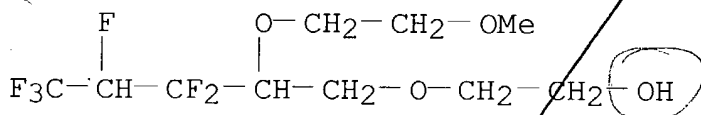
RN 121628-39-5 HCAPLUS

CN Ethanol, 2-[(2,2,3,4,4,5,5,6,6,7,7,8,8,9,9-pentadecafluorononyl)oxy]- (9CI) (CA INDEX NAME)



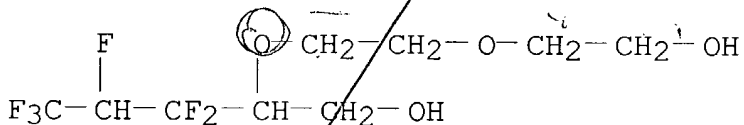
RN 121628-65-7 HCAPLUS

CN Ethanol, 2-[[3,3,4,5,5,5-hexafluoro-2-(2-methoxyethoxy)pentyl]oxy]- (9CI) (CA INDEX NAME)



RN 121664-33-3 HCAPLUS

CN 1-Pentanol, 3,3,4,5,5,5-hexafluoro-2-[2-(2-hydroxyethoxy)ethoxy]- (9CI) (CA INDEX NAME)



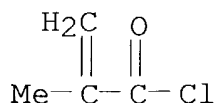
IT 920-46-7, Methacrylic acid chloride

RL: USES (Uses)

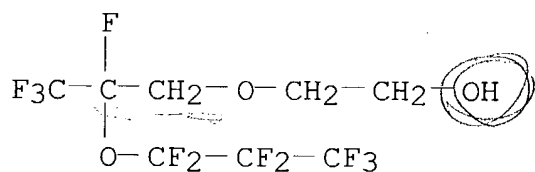
(reaction with, of fluorine-contg. glycols)

RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

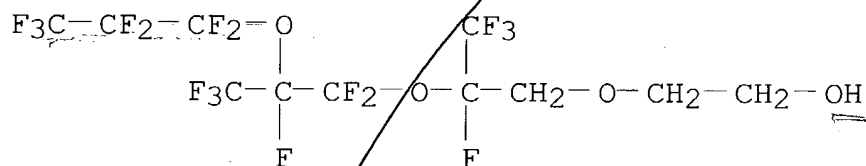


- IC ICM C07C043-12
ICS C07C043-13; C07C043-17; C07C043-178; C07C069-65; C08G065-32;
C08F283-06
- CC 35-8 (Chemistry of Synthetic High Polymers)
Section cross-reference(s): 37, 38, 63
- IT 25322-68-3DP, Polyethylene glycol, fluoroalkylated
63693-10-7P 121602-06-0P 121628-30-6P
121628-31-7P **121628-32-8P** 121628-33-9P
121628-34-0P **121628-35-1P** **121628-36-2P**
121628-37-3P 121628-38-4P **121628-39-5P** 121628-40-8P
121628-41-9P 121628-42-0P 121628-43-1P 121628-44-2P
121628-45-3P 121628-46-4P 121628-47-5P 121628-64-6P
121628-65-7P **121664-33-3P** 121664-34-4P
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and esterification of, with methacrylic acid chloride)
- IT **920-46-7**, Methacrylic acid chloride
RL: USES (Uses)
(reaction with, of fluorine-contg. glycols)
- L39 ANSWER 9 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN.
1988:511073 Document No. 109:111073 Fluorine-containing methacrylate
esters. Takaai, Toshio; Tarumi, Yasuro; Yamaguchi, Koichi;
Yamamoto, Yasushi (Shin-Etsu Chemical Industry Co., Ltd., Japan).
Jpn. Kokai Tokkyo Koho JP 63068542 A2 19880328 Showa, 4 pp.
(Japanese). CODEN: JKXXAF. APPLICATION: JP 1986-213589 19860910.
- AB The title esters $\text{H}_2\text{C}:\text{CMeCO}_2\text{CH}_2\text{CH}_2\text{OCH}_2\text{CF}(\text{CF}_3)[\text{OCF}_2\text{C}(\text{CF}_3)\text{F}]_n\text{F}$ (I; $n = 1-4$), useful for coatings and optical materials of low refractive
index, are prepd. Thus, $\text{H}_2\text{C}:\text{CMeCOCl}$ was added dropwise to a mixt.
of $\text{HOCH}_2\text{CH}_2\text{OCH}_2\text{CF}(\text{CF}_3)\text{OCF}_2\text{CF}_2\text{CF}_3$, Et_3N , and BHT, and the mixt. was
heated at 60.degree. for 1 h to give 87% I ($n = 1$).
- IT **67822-71-3** **67822-72-4**
RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of, with methacryloyl chloride)
- RN 67822-71-3 HCAPLUS
- CN Ethanol, 2-[2,3,3,3-tetrafluoro-2-(heptafluoropropoxy)propoxy]-
(9CI) (CA INDEX NAME)



RN 67822-72-4 HCAPLUS

CN Ethanol, 2-[2,3,3,3-tetrafluoro-2-[1,1,2,3,3,3-hexafluoro-2-(heptafluoropropoxy)propoxy]propoxy]- (9CI) (CA INDEX NAME)



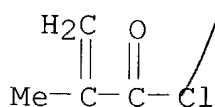
IT 920-46-7, Methacryloyl chloride

RL: USES (Uses)

(esterification with, of fluorooxaalkanols)

RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



IC ICM C07C069-653

ICA C08F020-28

CC 35-2 (Chemistry of Synthetic High Polymers)

Section cross-reference(s): 23

IT 67822-71-3 67822-72-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(esterification of, with methacryloyl chloride)

IT 920-46-7, Methacryloyl chloride

RL: USES (Uses)

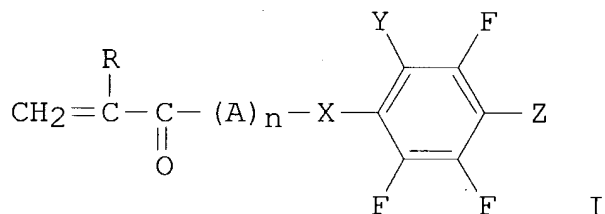
(esterification with, of fluorooxaalkanols)

L39 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

1987:441977 Document No. 107:41977 Manufacture of antifungal and antibacterial agents. Ishikawa, Nobuo; Takaoka, Akio; Motoyoshi, Masatoshi; Narita, Kichihei; Kawashima, Atsuo; Hayashi, Yoshihiro (SDS Biotech K. K., Japan; San Nopco Ltd.). Jpn. Kokai Tokkyo Koho

JP 62005936 A2 19870112 Showa, 17 pp. (Japanese). CODEN: JKXXAF.
APPLICATION: JP 1985-136126 19850624.

GI



AB Fluoro arom. compds. I [A = OCH₂CH₂, OCH(CH₃)CH₂, OCH₂CH(OH)CH₂; R = H, Me; X = O, S, CO₂; Y, Z = F, CN; n = 1-4] are prepd. and are useful as stable antibacterial and antifungal agents. Thus, a mixt. contg. tetrafluoroisophthalonitrile 140, hydroxyethyl acrylate 90, KF 58, and methylhydroquinone 0.4 g was reacted in 300 mL CH₃CN to give 98% product, 0.5% of which was mixed with a poly(vinyl chloride) paste and used as a paper coating which displayed no color change after 5 h UV radiation.

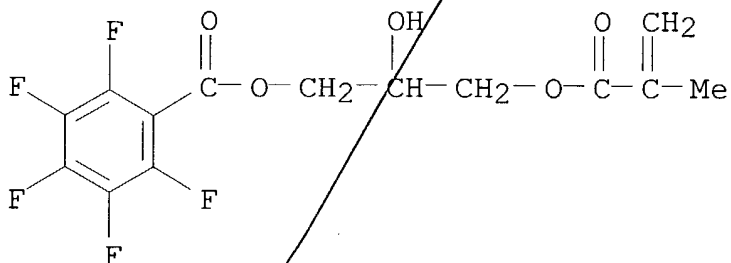
IT **105595-70-8**, 3-Pentafluorobenzoyloxy-2-hydroxypropyl methacrylate **109231-07-4**, 3-(2,4-Dicyano-3,5,6-trifluorophenoxy)-2-hydroxypropyl acrylate

RL: USES (Uses)

(antifungal and antibacterial agents, for industrial use)

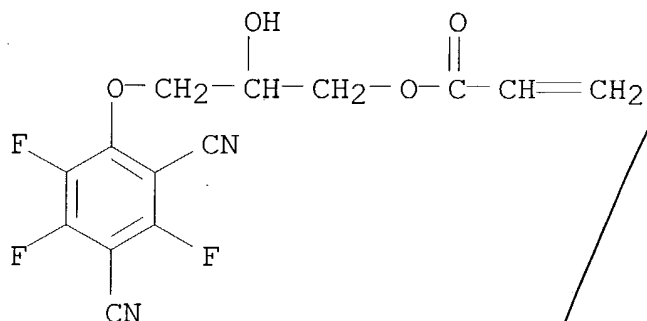
RN 105595-70-8 HCAPLUS

CN Benzoic acid, pentafluoro-, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl ester (9CI) (CA INDEX NAME)

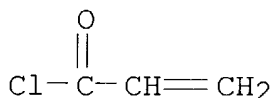


RN 109231-07-4 HCAPLUS

CN 2-Propenoic acid, 3-(2,4-dicyano-3,5,6-trifluorophenoxy)-2-hydroxypropyl ester (9CI) (CA INDEX NAME)



IT **814-68-6**, Acryloyl chloride
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with dicyanotrifluorophenylthioethanol)
 RN 814-68-6 HCAPLUS
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



IC ICM C07C069-54
 ICS A01N037-12; A01N037-34; C07C069-76; C07C120-00; C07C121-52;
 C07C121-75; C07C149-36
 CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
 Section cross-reference(s): 5, 25, 42
 IT **105595-70-8**, 3-Pentafluorobenzoyloxy-2-hydroxypropyl
 methacrylate 109231-02-9, 2,4-Dicyano-3,5,6-trifluorophenoxyethyl
 acrylate 109231-03-0, 2,4-Dicyano-3,5,6-trifluorophenoxyethoxyethyl
 acrylate 109231-04-1, 2,4-Dicyano-3,5,6-
 trifluorophenoxyethoxyethoxyethyl acrylate 109231-05-2,
 2,4-Dicyano-3,5,6-trifluorophenoxy-3,6,9-trioxaundecyl acrylate
 109231-06-3, 2,4-Dicyano-3,5,6-trifluorophenoxyisopropyl acrylate
109231-07-4, 3-(2,4-Dicyano-3,5,6-trifluorophenoxy)-2-
 hydroxypropyl acrylate 109231-08-5, 2,4-Dicyano-3,5,6-
 trifluorophenoxyethyl methacrylate 109231-09-6,
 2,4-Dicyano-3,5,6-trifluorophenoxyisopropyl methacrylate
 109231-12-1, 4-Cyano-2,3,5,6-tetrafluorophenoxyethyl acrylate
 109231-13-2, 4-Cyano-2,3,5,6-tetrafluorophenoxyethyl methacrylate
 109231-14-3, 4-Cyano-2,3,5,6-tetrafluorophenylthioethyl acrylate
 109231-15-4, 2,4-Dicyano-3,5,6-trifluorophenoxyacrylate
 109231-16-5, 2,4-Dicyano-3,5,6-trifluorophenoxy methacryl
 RL: USES (Uses)

(antifungal and antibacterial agents, for industrial use)

IT **814-68-6**, Acryloyl chloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction of, with dicyanotrifluorophenylthioethanol)

L39 ANSWER 11 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

1983:470230 Document No. 99:70230 Perfluoroalkyl substituted compounds. (Sagami Chemical Research Center, Japan). Jpn. Kokai Tokkyo Koho JP 58057324 A2 19830405 Showa, 11 pp. (Japanese). CODEN: JKXXAF. APPLICATION: JP 1981-153855 19810930.

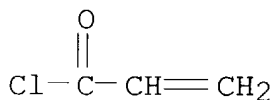
AB RR1R2C(CR3:CR4)nCR5R6R7 (I, R = perfluoroalkyl, R1-R6 = H, halo, alkyl, aryl; R7 = halo, OH, cyano, formyloxy, SCN, amido, alkoxy, acyloxy, acylthio, allylcarbonyloxy, allylcarbonylthio; n = 0, 1) were prepd. Thus, stirring CF₃(CF₂)₇I+Ph CF₃SO₃⁻ with CH₂:CHCH:CH₂ in CH₂Cl₂/H₂O in the presence of NaHCO₃ gave 47% I [R = CF₃(CF₂)₇, R1-R6 = H, R7 = OH, n = 1].

IT **814-68-6 920-46-7**

RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation by, of perfluoroalkylbutenol)

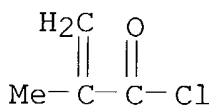
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

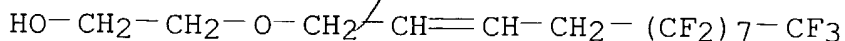


IT **86624-53-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 86624-53-5 HCAPLUS

CN Ethanol, 2-[(5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heptafluoro-2-dodecenyl)oxy]- (9CI) (CA INDEX NAME)

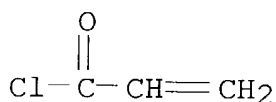


IC C07C019-08; C07C017-00; C07C021-18; C07C031-38; C07C033-02;
 C07C043-12; C07C043-17; C07C069-003; C07C069-007; C07C117-00;
 C07C121-16; C07C121-30; C07C153-07; C07C161-02
 CC 23-17 (Aliphatic Compounds)
 IT **814-68-6 920-46-7**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (acylation by, of perfluoroalkylbutenol)
 IT 678-39-7P 50877-04-8P 82486-11-1P 82486-12-2P 82486-15-5P
 82486-16-6P 86235-55-4P 86624-51-3P 86624-52-4P
86624-53-5P 86624-54-6P 86624-55-7P 86624-57-9P
 86624-58-0P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

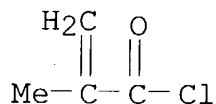
L39 ANSWER 12 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
 1983:470229 Document No. 99:70229 Perfluoroalkylbutenyl compounds.
 (Sagami Chemical Research Center, Japan). Jpn. Kokai Tokkyo Koho JP
 58057327 A2 19830405 Showa, 9 pp. (Japanese). CODEN: JKXXAF.
 APPLICATION: JP 1981-153857 19810930.

AB RCH₂CH:CHCH₂OR₁ (I, R = perfluoroalkyl, R₁ = H, HOCH₂CH₂, formyl,
 alkylcarbonyl, alkenylcarbonyl) were prepd. Thus, stirring
 CF₃(CF₂)₇I+Ph CF₃SO₃⁻ with CH₂:CHCH:CH₂ in CH₂Cl₂/H₂O in the
 presence of NaHCO₃ gave 47% I [R = CF₃(CF₂)₇, R₁ = H].

IT **814-68-6 920-46-7**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (acylation by, of perfluoroalkylbutenol)
 RN 814-68-6 HCAPLUS
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)

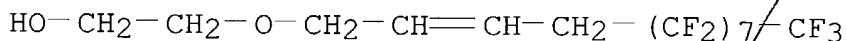


RN 920-46-7 HCAPLUS
 CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



IT **86624-53-5P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 RN 86624-53-5 HCAPLUS

CN Ethanol, 2-[(5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heptafluoro-2-dodecenyl)oxy]- (9CI) (CA INDEX NAME)



IC C07C033-42; C07C043-178; C07C069-62

CC 23-17 (Aliphatic Compounds)

IT **814-68-6 920-46-7**

RL: RCT (Reactant); RACT (Reactant or reagent)
(acylation by, of perfluoroalkylbutenol)

IT 86235-55-4P **86624-53-5P** 86624-54-6P 86624-55-7P
86624-56-8P 86624-59-1P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

L39 ANSWER 13 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

1977:189226 Document No. 86:189226 Perfluoro-tert-butyl esters and ethers. Pavlik, Frank J. (Minnesota Mining and Manufacturing Co., USA). U.S. US 4010212 19770301, 5 pp. Division of U.S. 3,981,928. (English). CODEN: USXXAM. APPLICATION: US 1976-695901 19760614.

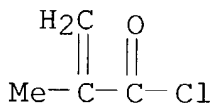
AB Perfluoroisobutene was oxidized with H₂O₂ and the resultant epoxide was autoclaved with HF at 250.degree. for 64 h to give (CF₃)₃COH, which was converted to various ethers, esters, and their derivs. (in all .apprx.17 compds.), e.g., the acrylate, methacrylate, (CF₃)₃COCH₂CH₂OH, and (CF₃)₃CO(CH₂)₉CH:CH₂. The compds. prepd. or their derivs. are useful as surfactants, monomers, plasticizers, and water-repellant agents for textiles, paper, and leather, etc. (no data).

IT **920-46-7**

RL: RCT (Reactant); RACT (Reactant or reagent)
(esterification of perfluoro-tert-butyl alc. with)

RN 920-46-7 HCAPLUS

CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

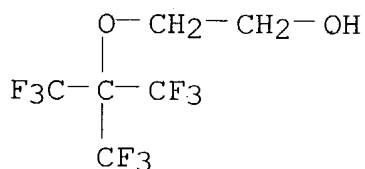


IT **17526-98-6P 17527-06-9P 36620-67-4P**

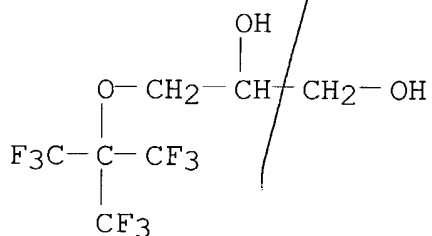
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

RN 17526-98-6 HCAPLUS

CN Ethanol, 2-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethoxy]- (9CI)
(CA INDEX NAME)

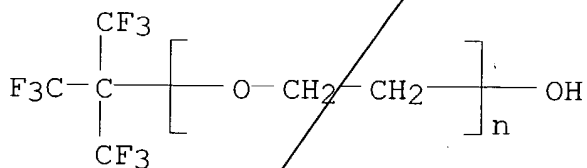


RN 17527-06-9 HCAPLUS

CN 1,2-Propanediol, 3-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethoxy]-
(9CI) (CA INDEX NAME)

RN 36620-67-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)

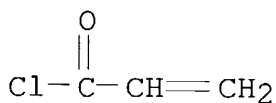


IT 814-68-6

RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with sodium perfluoro-tert-butylate)

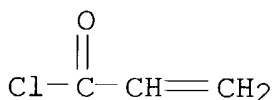
RN 814-68-6 HCAPLUS

CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)

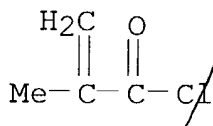


IC C07C043-12

NCL 260615000F
 CC 23-17 (Aliphatic Compounds)
 Section cross-reference(s): 35, 36, 41, 39, 43, 46
 IT **920-46-7**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (esterification of perfluoro-tert-butyl alc. with)
 IT 17526-96-4P 17526-97-5P **17526-98-6P** 17526-99-7P
 17527-00-3P 17527-01-4P 17527-02-5P 17527-03-6P 17527-05-8P
17527-06-9P 24165-10-4P 36558-53-9P 36558-55-1P
36620-67-4P 61468-28-8P 62789-48-4P
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 IT 75-21-8, reactions 75-78-5 96-24-2 98-58-8 105-36-2
 108-77-0 115-21-9 540-51-2 **814-68-6** 6271-23-4
 7766-50-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with sodium perfluoro-tert-butylate)
 L39 ANSWER 14 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN
 1977:16294 Document No. 86:16294 Perfluorotertiaryalkyl ethers.
 Pavlik, Frank J. (Minnesota Mining and Manufacturing Co., USA).
 U.S. US 3981928 19760921, 5 pp. (English). CODEN: USXXAM.
 APPLICATION: US 1970-32477 19700413.
 AB Reaction of (CF₃)₃CONa with substituted alkyl halides gave (CF₃)₃COR
 [R = CH₂CH₂OH, CH₂CO₂Et, (CH₂)₉CH:CH₂, (CH₂)₁₀CO₂Et,
 CH₂CH(OH)CH₂OH].
 IT **814-68-6 920-46-7**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (esterification of, with perfluoro-tert-butyl alc.)
 RN 814-68-6 HCAPLUS
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS
 CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)

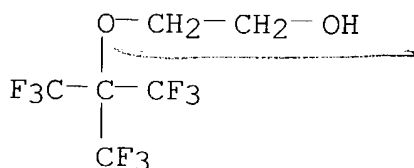


IT 17526-98-6P 17527-06-9P 36620-67-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. of)

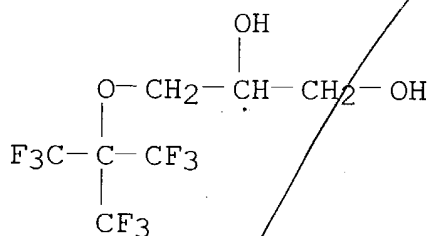
RN 17526-98-6 HCAPLUS

CN Ethanol, 2-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethoxy]- (9CI)
(CA INDEX NAME)



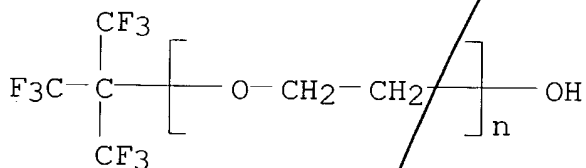
RN 17527-06-9 HCAPLUS

CN 1,2-Propanediol, 3-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethoxy]-
(9CI) (CA INDEX NAME)



RN 36620-67-4 HCAPLUS

CN Poly(oxy-1,2-ethanediyl), .alpha.-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IC C07C043-12

NCL 260615000F

CC 23-9 (Aliphatic Compounds)

IT 98-58-8 358-23-6 407-25-0 **814-68-6 920-46-7**

RL: RCT (Reactant); RACT (Reactant or reagent)

(esterification of, with perfluoro-tert-butyl alc.)

IT 17526-96-4P 17526-97-5P **17526-98-6P** 17526-99-7P

17527-01-4P 17527-02-5P 17527-03-6P 17527-05-8P

17527-06-9P 24165-10-4P 36558-53-9P 36558-55-1P
 36620-67-4P 61468-26-6P 61468-27-7P 61468-28-8P
 61468-29-9P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

L39 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2004 ACS on STN

1972:500830 Document No. 77:100830 Esters of perfluoro tertiary aliphatic alcohols and hydrocarbyl or halohydrocarbyl carboxylic acids. Pavlik, Frank J. (Minnesota Mining and Manufacturing Co.). U.S. US 3668233 19720606, 5 pp. (English). CODEN: USXXAM. APPLICATION: US 1970-28242 19700417.

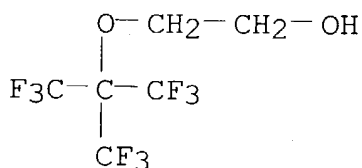
AB Perfluoro-tert-butyl compds. were prepd. by treating perfluoroisobutene-1,2- epoxide with HF to give (F3C)3COH (I), which reacted with acid chlorides and other halo compds. Thus, I with CH2:CMeCOCl gave (F3C)3CO2CCMe:CH2; I with Br(CH2)9CH:CH2 gave (F3C)3CO(CH2)9CH:CH2; and I with Me2SiCl2 gave Me2Si[OC(CF3)3]2. Many of the products were useful as monomers or textile treating agents.

IT 17526-98-6P 17527-06-9P 36620-67-4P

RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)

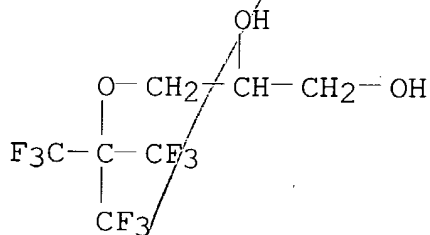
RN 17526-98-6 HCAPLUS

CN Ethanol, 2-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethoxy]- (9CI)
 (CA INDEX NAME)

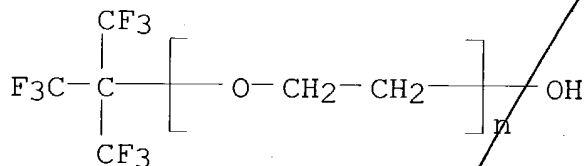


RN 17527-06-9 HCAPLUS

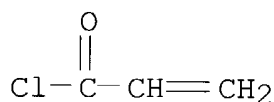
CN 1,2-Propanediol, 3-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethoxy]- (9CI) (CA INDEX NAME)



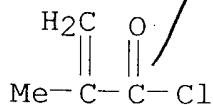
RN 36620-67-4 HCAPLUS
 CN Poly(oxy-1,2-ethanediyl), .alpha.-[2,2,2-trifluoro-1,1-bis(trifluoromethyl)ethyl]-.omega.-hydroxy- (9CI) (CA INDEX NAME)



IT **814-68-6 920-46-7**
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with sodium perfluoro-tert-butoxide)
 RN 814-68-6 HCAPLUS
 CN 2-Propenoyl chloride (9CI) (CA INDEX NAME)



RN 920-46-7 HCAPLUS
 CN 2-Propenoyl chloride, 2-methyl- (9CI) (CA INDEX NAME)



IC C07C
 NCL 260471000C
 CC 23-17 (Aliphatic Compounds)
 Section cross-reference(s): 29, 35
 IT 2378-02-1P 17526-96-4P 17526-97-5P **17526-98-6P**
 17526-99-7P 17527-00-3P 17527-01-4P 17527-02-5P 17527-03-6P
 17527-05-8P **17527-06-9P** 24165-10-4P 36558-53-9P
 36558-55-1P **36620-67-4P**
 RL: SPN (Synthetic preparation); PREP (Preparation)
 (prepn. of)
 IT 75-78-5 96-24-2 98-58-8 105-36-2 108-77-0 115-21-9
 358-23-6 407-25-0 540-51-2 **814-68-6 920-46-7**
 6271-23-4 7766-50-9
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (reaction of, with sodium perfluoro-tert-butoxide)